

## Pantheon Report

Generated at 2018-12-20 10:08:00 (UTC).

Data path: India on `em1` (*remote*) → AWS India 1 on `ens5` (*local*).

Repeated the test of 19 congestion control schemes 5 times.

Each test lasted for 30 seconds running 3 flows with 10-second interval between two flows.

NTP offsets were measured against `nets.org.sg` and have been applied to correct the timestamps in logs.

### System info:

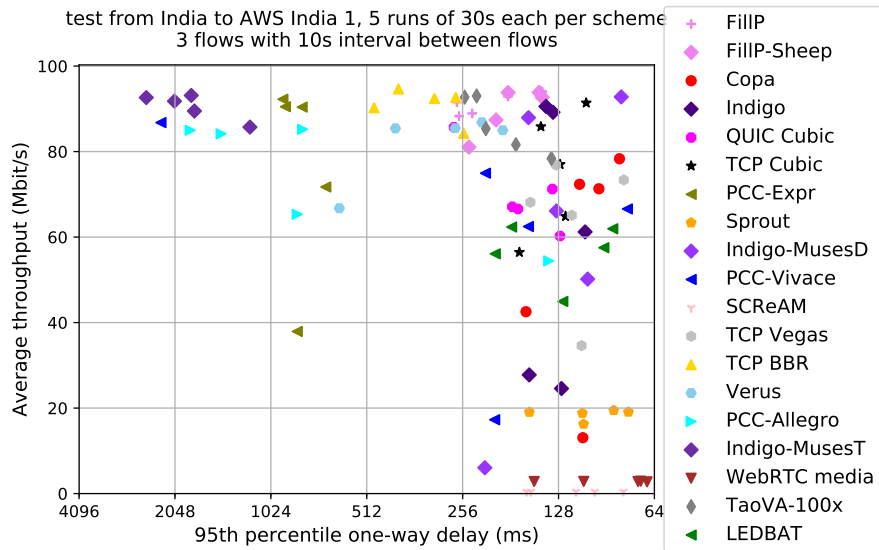
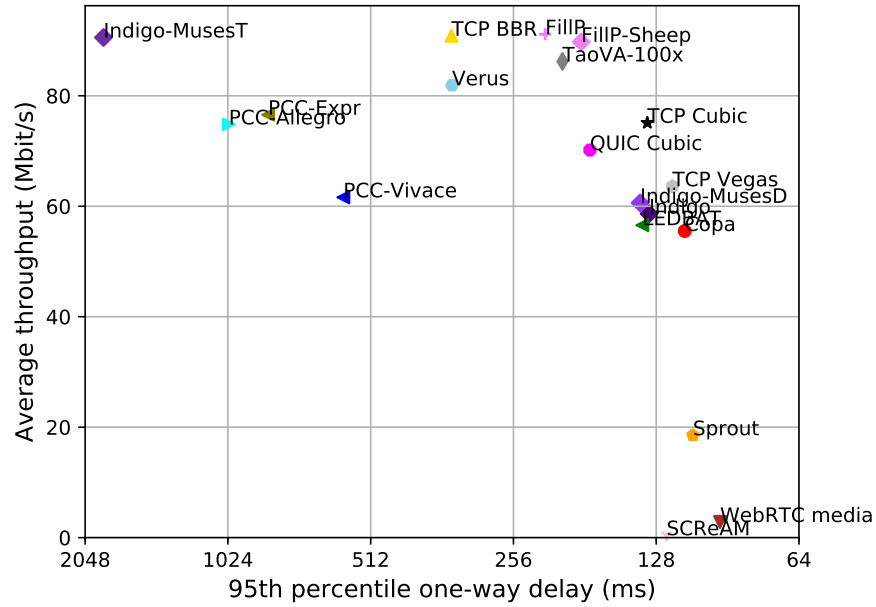
```
Linux 4.15.0-1029-aws
net.core.default_qdisc = fq
net.core.rmem_default = 16777216
net.core.rmem_max = 536870912
net.core.wmem_default = 16777216
net.core.wmem_max = 536870912
net.ipv4.tcp_rmem = 4096 16777216 536870912
net.ipv4.tcp_wmem = 4096 16777216 536870912
```

### Git summary:

```
branch: muses @ c654af0b7d59d4ef4b914cfac404e1fc2e96dc68
third_party/fillp @ d6da1459332fcee56963885d7eba17e6a32d4519
third_party/fillp-sheep @ 0e5bb722943babcd2b090d2c64fcd45e12e923f9
third_party/genericCC @ d0153f8e594aa89e93b032143cedbdfc58e562f4
third_party/indigo @ 2601c92e4aa9d58d38dc4dfe0ecd90c077e64d
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/muses @ 65ac1b19bbefed0c6349ae986009b4fa8643c40a
third_party/muses-refactored @ 31f8f0ba8ef8b1da76c2bc0cd0a7850c33ff64fb
third_party/pantheon-tunnel @ f866d3f58d27afd942717625ee3a354cc2e802bd
third_party/pcc @ 1afc958fa0d66d18b623c091a55fec872b4981e1
M receiver/src/buffer.h
M receiver/src/core.cpp
M sender/src/buffer.h
M sender/src/core.cpp
third_party/pcc-experimental @ cd43e34e3f5f5613e8acd08fab92c4eb24f974ab
third_party/proto-quick @ 77961f1a82733a86b42f1bc8143ebc978f3cff42
third_party/scream-reproduce @ f099118d1421aa3131bf11ff1964974e1da3bdb2
M src/ScreamClient
M src/ScreamServer
third_party/sprout @ 366e35c6178b01e31d4a46ad18c74f9415f19a26
M src/examples/cellsim.cc
M src/examples/sproutbt2.cc
M src/network/sproutconn.cc
third_party/verus @ d4b447ea74c6c60a261149af2629562939f9a494
M src/verus.hpp
```

```
M tools/plot.py
third_party/vivace @ 2baf86211435ae071a32f96b7d8c504587f5d7f4
third_party/webrtc @ 3f0cc2a9061a41b6f9dde4735770d143a1fa2851
```

test from India to AWS India 1, 5 runs of 30s each per scheme  
 3 flows with 10s interval between flows (mean of all runs by scheme)



scheme	# runs	mean avg tput (Mbit/s)			mean 95th-%ile delay (ms)			mean loss rate (%)		
		flow 1	flow 2	flow 3	flow 1	flow 2	flow 3	flow 1	flow 2	flow 3
TCP BBR	5	56.74	37.03	28.85	299.52	316.07	538.36	2.93	3.52	5.05
Copa	5	32.91	24.29	19.52	111.02	112.59	110.30	0.18	0.30	0.72
TCP Cubic	5	45.37	30.55	28.52	140.62	127.09	169.50	0.25	0.47	1.35
FillP	5	54.90	38.65	31.89	211.03	222.98	217.39	0.65	2.66	3.46
FillP-Sheep	5	57.19	35.67	26.71	172.18	194.05	202.41	0.44	0.73	1.62
Indigo	5	34.30	23.97	25.94	131.52	131.51	138.24	0.30	0.29	0.65
Indigo-MusesD	5	35.09	26.62	23.78	137.74	141.37	136.28	0.12	0.28	0.96
Indigo-MusesT	5	53.08	39.99	36.53	1790.84	1789.46	1601.70	18.07	29.12	25.22
LEDBAT	5	32.35	27.58	17.78	137.16	137.83	135.78	0.28	0.42	1.37
PCC-Allegro	5	40.05	43.90	17.02	899.87	315.56	159.16	4.57	0.80	1.28
PCC-Expr	5	49.66	28.70	23.90	825.62	500.16	204.22	26.77	7.26	1.24
QUIC Cubic	5	39.83	32.61	26.34	164.12	188.82	183.37	0.23	0.45	1.18
SCReAM	5	0.22	0.22	0.22	121.39	119.04	119.42	0.26	0.36	0.65
Sprout	5	9.41	9.29	9.02	106.13	107.65	108.97	0.27	0.45	0.89
TaoVA-100x	5	49.80	40.27	29.05	197.04	204.41	216.21	0.50	0.73	2.02
TCP Vegas	5	35.60	26.49	31.50	119.37	117.87	121.18	0.21	0.40	0.88
Verus	5	49.74	32.74	31.73	267.97	421.27	564.26	0.53	0.85	1.96
PCC-Vivace	5	43.77	21.81	10.24	603.95	143.85	138.92	2.42	0.60	1.34
WebRTC media	5	1.60	0.91	0.32	91.85	93.25	94.01	0.12	0.16	0.92

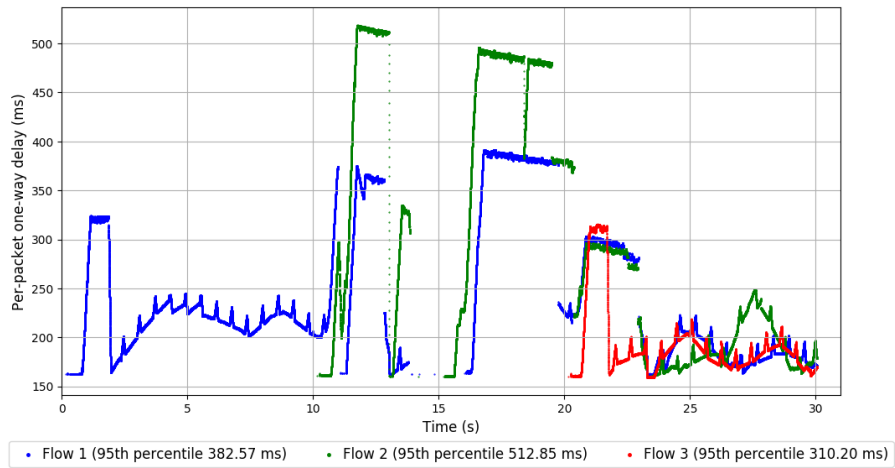
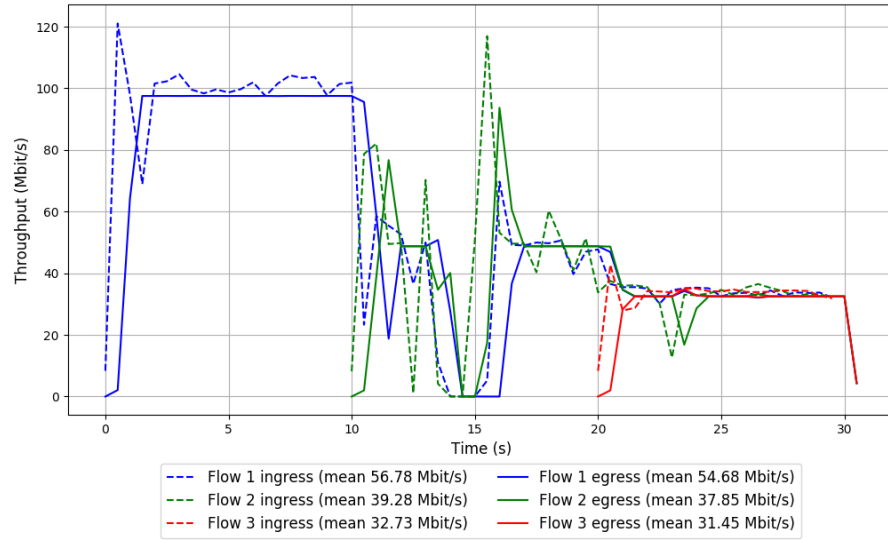


Run 1: Statistics of TCP BBR

Start at: 2018-12-20 08:12:23  
End at: 2018-12-20 08:12:53  
Local clock offset: -1.536 ms  
Remote clock offset: -93.787 ms

# Below is generated by plot.py at 2018-12-20 09:58:13  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 90.26 Mbit/s  
95th percentile per-packet one-way delay: 485.527 ms  
Loss rate: 4.05%  
-- Flow 1:  
Average throughput: 54.68 Mbit/s  
95th percentile per-packet one-way delay: 382.575 ms  
Loss rate: 3.96%  
-- Flow 2:  
Average throughput: 37.85 Mbit/s  
95th percentile per-packet one-way delay: 512.845 ms  
Loss rate: 4.01%  
-- Flow 3:  
Average throughput: 31.45 Mbit/s  
95th percentile per-packet one-way delay: 310.201 ms  
Loss rate: 4.62%

# Run 1: Report of TCP BBR — Data Link

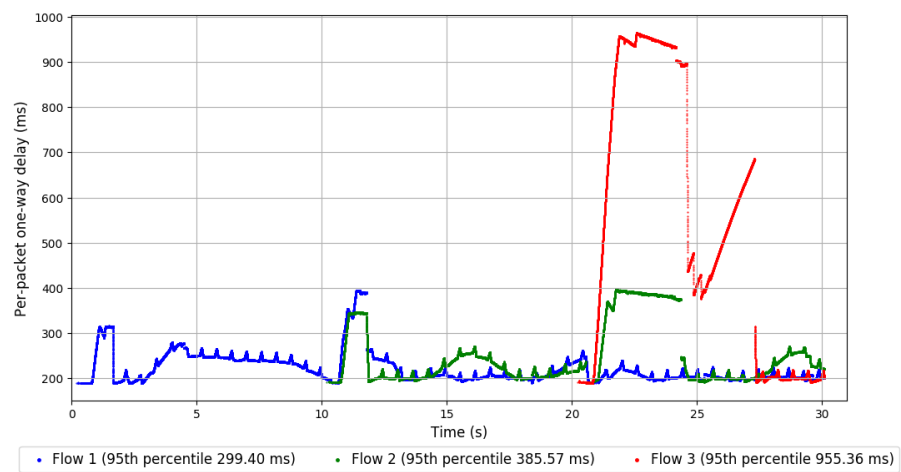
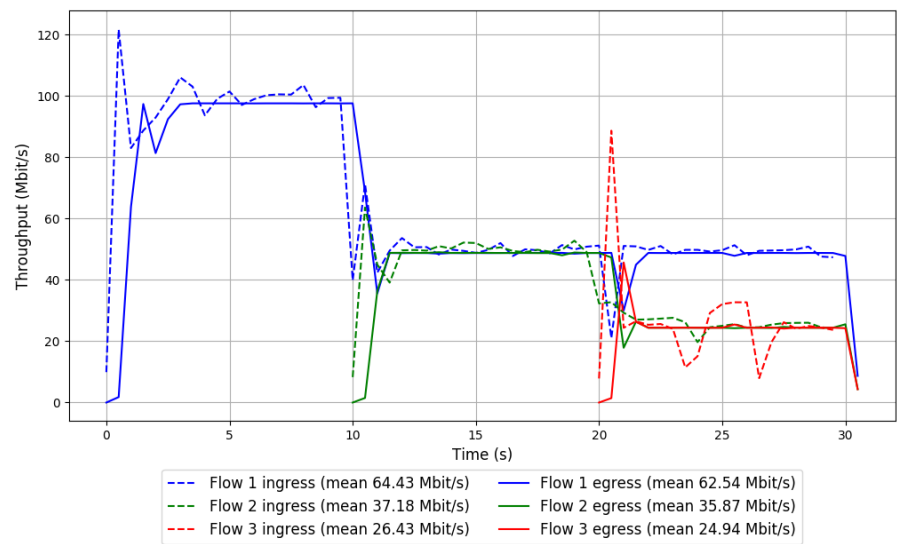


Run 2: Statistics of TCP BBR

Start at: 2018-12-20 08:36:44  
End at: 2018-12-20 08:37:14  
Local clock offset: 0.85 ms  
Remote clock offset: -120.135 ms

# Below is generated by plot.py at 2018-12-20 09:58:17  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 94.65 Mbit/s  
95th percentile per-packet one-way delay: 407.089 ms  
Loss rate: 3.65%  
-- Flow 1:  
Average throughput: 62.54 Mbit/s  
95th percentile per-packet one-way delay: 299.400 ms  
Loss rate: 3.18%  
-- Flow 2:  
Average throughput: 35.87 Mbit/s  
95th percentile per-packet one-way delay: 385.567 ms  
Loss rate: 3.93%  
-- Flow 3:  
Average throughput: 24.94 Mbit/s  
95th percentile per-packet one-way delay: 955.364 ms  
Loss rate: 6.35%

Run 2: Report of TCP BBR — Data Link

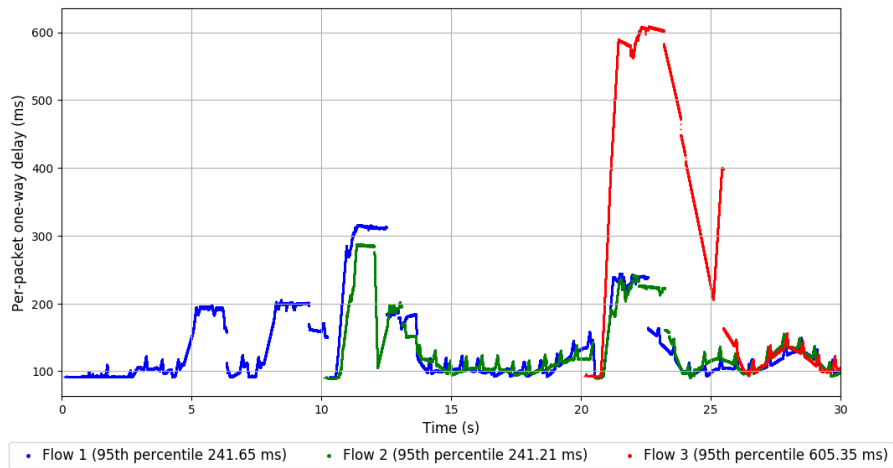
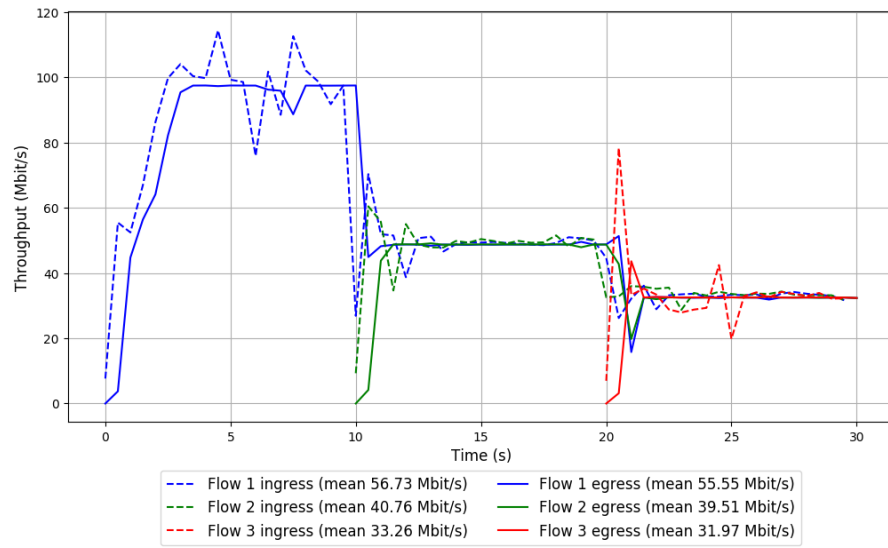


Run 3: Statistics of TCP BBR

Start at: 2018-12-20 09:01:30  
End at: 2018-12-20 09:02:00  
Local clock offset: -1.528 ms  
Remote clock offset: -23.208 ms

# Below is generated by plot.py at 2018-12-20 09:58:17  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 92.42 Mbit/s  
95th percentile per-packet one-way delay: 313.940 ms  
Loss rate: 2.91%  
-- Flow 1:  
Average throughput: 55.55 Mbit/s  
95th percentile per-packet one-way delay: 241.646 ms  
Loss rate: 2.34%  
-- Flow 2:  
Average throughput: 39.51 Mbit/s  
95th percentile per-packet one-way delay: 241.206 ms  
Loss rate: 3.42%  
-- Flow 3:  
Average throughput: 31.97 Mbit/s  
95th percentile per-packet one-way delay: 605.346 ms  
Loss rate: 4.63%

### Run 3: Report of TCP BBR — Data Link

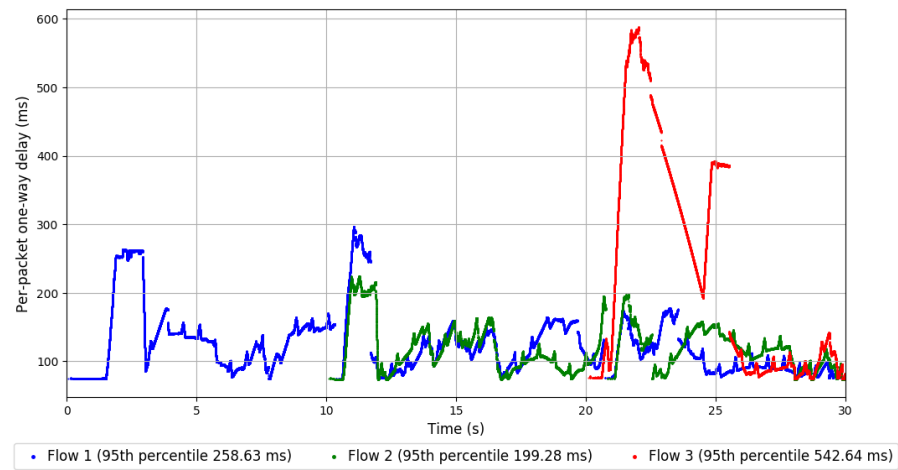
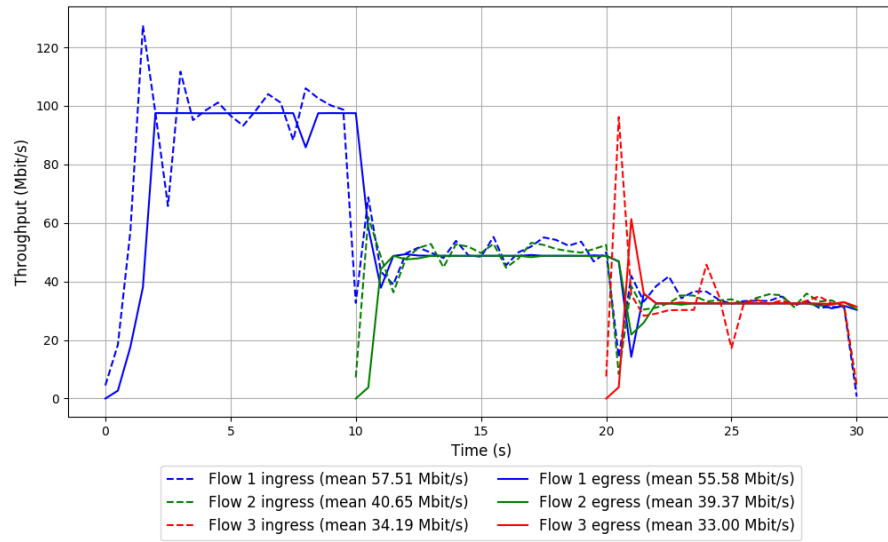


Run 4: Statistics of TCP BBR

Start at: 2018-12-20 09:26:21  
End at: 2018-12-20 09:26:51  
Local clock offset: -0.214 ms  
Remote clock offset: -5.608 ms

# Below is generated by plot.py at 2018-12-20 09:58:17  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 92.69 Mbit/s  
95th percentile per-packet one-way delay: 269.082 ms  
Loss rate: 3.89%  
-- Flow 1:  
Average throughput: 55.58 Mbit/s  
95th percentile per-packet one-way delay: 258.634 ms  
Loss rate: 3.70%  
-- Flow 2:  
Average throughput: 39.37 Mbit/s  
95th percentile per-packet one-way delay: 199.279 ms  
Loss rate: 3.86%  
-- Flow 3:  
Average throughput: 33.00 Mbit/s  
95th percentile per-packet one-way delay: 542.640 ms  
Loss rate: 4.93%

#### Run 4: Report of TCP BBR — Data Link



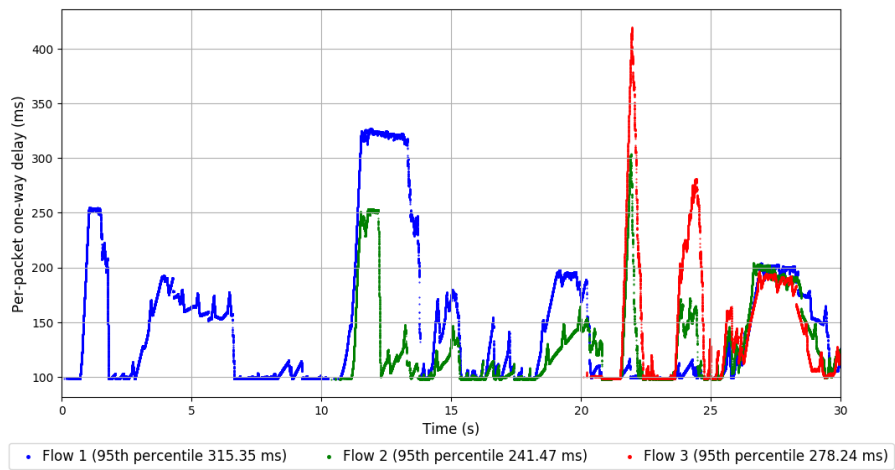
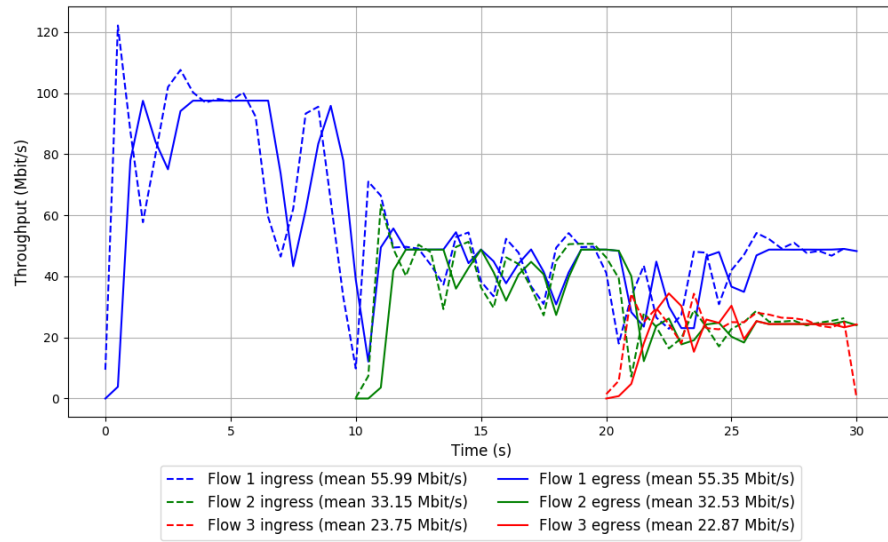


Run 5: Statistics of TCP BBR

Start at: 2018-12-20 09:52:14  
End at: 2018-12-20 09:52:44  
Local clock offset: -0.793 ms  
Remote clock offset: -25.402 ms

# Below is generated by plot.py at 2018-12-20 09:58:17  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 84.27 Mbit/s  
95th percentile per-packet one-way delay: 254.158 ms  
Loss rate: 2.01%  
-- Flow 1:  
Average throughput: 55.35 Mbit/s  
95th percentile per-packet one-way delay: 315.348 ms  
Loss rate: 1.48%  
-- Flow 2:  
Average throughput: 32.53 Mbit/s  
95th percentile per-packet one-way delay: 241.474 ms  
Loss rate: 2.38%  
-- Flow 3:  
Average throughput: 22.87 Mbit/s  
95th percentile per-packet one-way delay: 278.235 ms  
Loss rate: 4.73%

## Run 5: Report of TCP BBR — Data Link

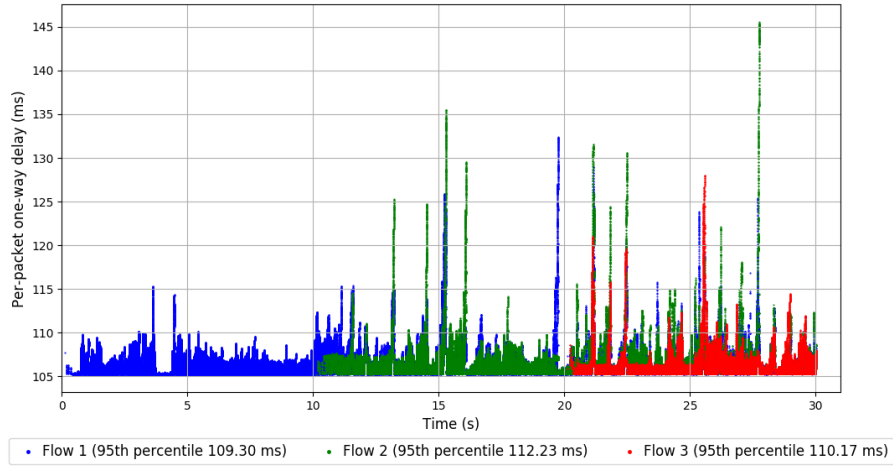
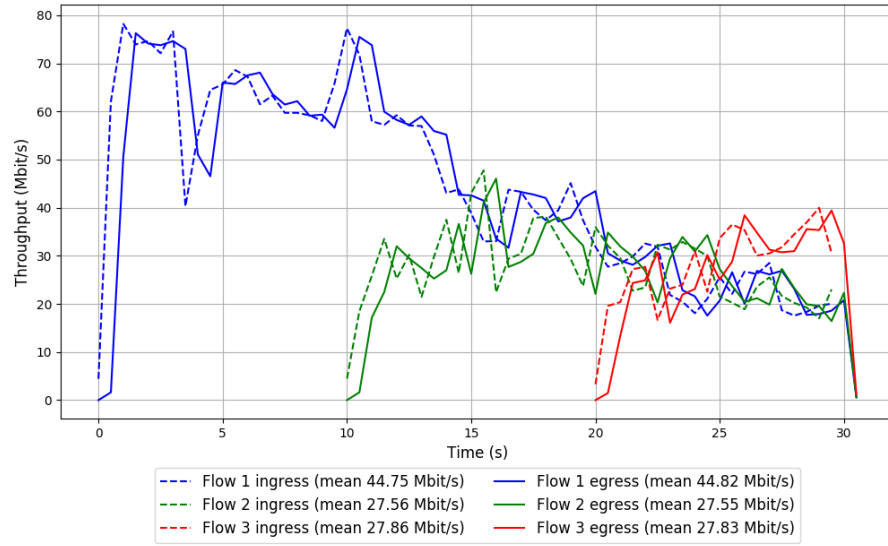


Run 1: Statistics of Copa

Start at: 2018-12-20 08:08:32  
End at: 2018-12-20 08:09:02  
Local clock offset: -2.518 ms  
Remote clock offset: -41.413 ms

# Below is generated by plot.py at 2018-12-20 09:58:49  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 72.35 Mbit/s  
95th percentile per-packet one-way delay: 109.964 ms  
Loss rate: 0.28%  
-- Flow 1:  
Average throughput: 44.82 Mbit/s  
95th percentile per-packet one-way delay: 109.300 ms  
Loss rate: 0.12%  
-- Flow 2:  
Average throughput: 27.55 Mbit/s  
95th percentile per-packet one-way delay: 112.226 ms  
Loss rate: 0.38%  
-- Flow 3:  
Average throughput: 27.83 Mbit/s  
95th percentile per-packet one-way delay: 110.169 ms  
Loss rate: 0.88%

# Run 1: Report of Copa — Data Link

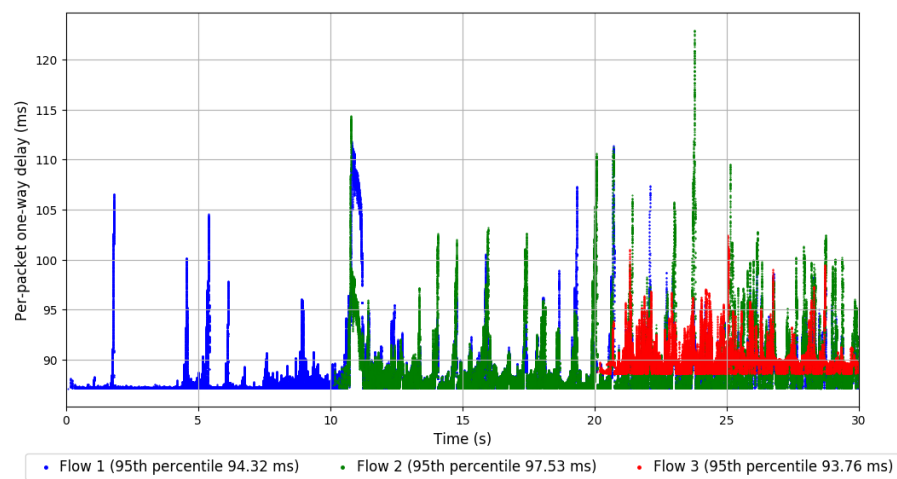
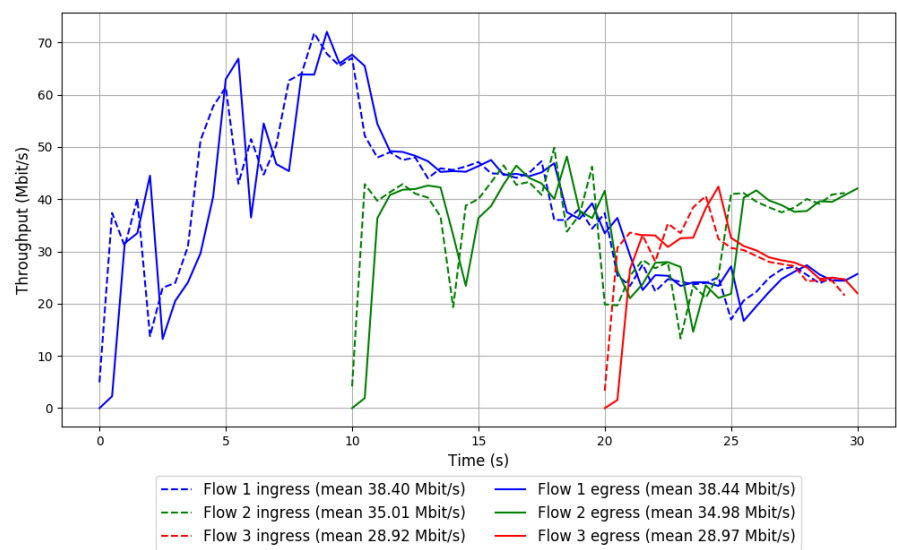


Run 2: Statistics of Copa

Start at: 2018-12-20 08:32:52  
End at: 2018-12-20 08:33:22  
Local clock offset: -0.695 ms  
Remote clock offset: -19.594 ms

# Below is generated by plot.py at 2018-12-20 09:58:49  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 71.30 Mbit/s  
95th percentile per-packet one-way delay: 95.590 ms  
Loss rate: 0.31%  
-- Flow 1:  
Average throughput: 38.44 Mbit/s  
95th percentile per-packet one-way delay: 94.317 ms  
Loss rate: 0.15%  
-- Flow 2:  
Average throughput: 34.98 Mbit/s  
95th percentile per-packet one-way delay: 97.525 ms  
Loss rate: 0.46%  
-- Flow 3:  
Average throughput: 28.97 Mbit/s  
95th percentile per-packet one-way delay: 93.763 ms  
Loss rate: 0.59%

Run 2: Report of Copa — Data Link

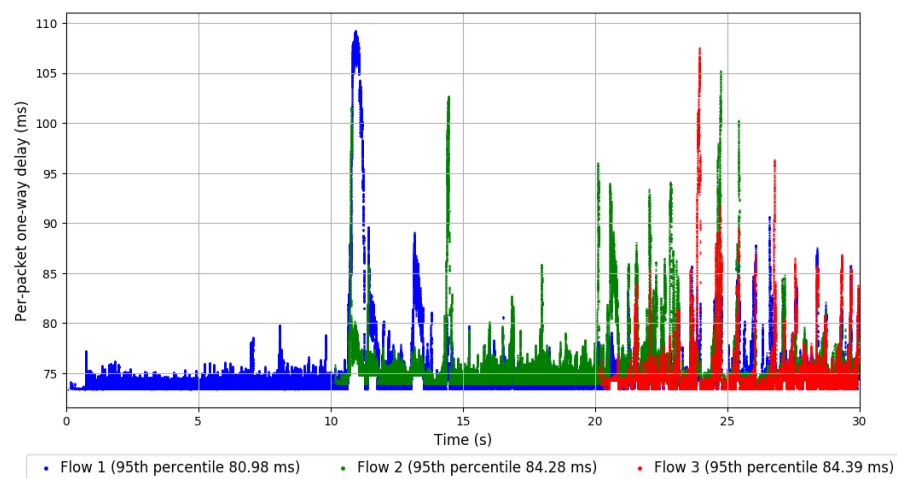
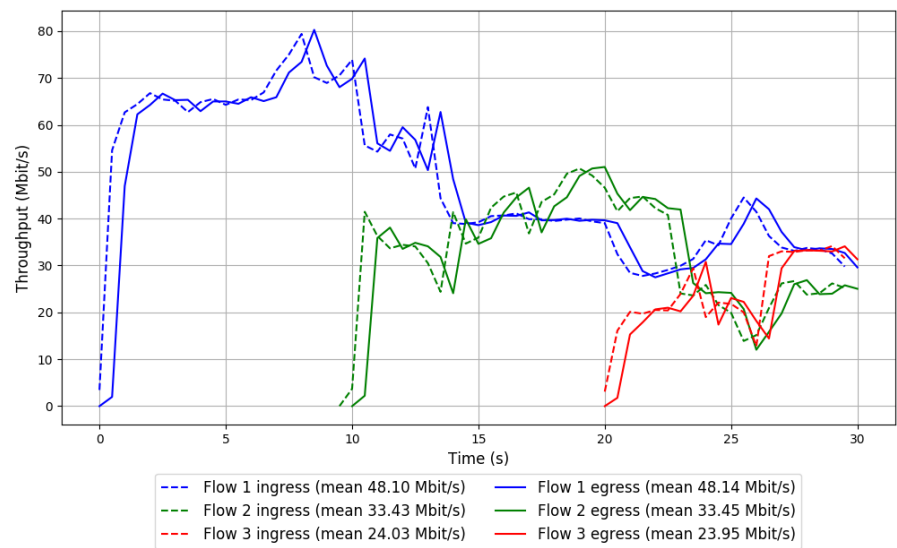


Run 3: Statistics of Copa

Start at: 2018-12-20 08:57:10  
End at: 2018-12-20 08:57:40  
Local clock offset: 0.751 ms  
Remote clock offset: -2.697 ms

# Below is generated by plot.py at 2018-12-20 09:58:58  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 78.32 Mbit/s  
95th percentile per-packet one-way delay: 82.379 ms  
Loss rate: 0.32%  
-- Flow 1:  
Average throughput: 48.14 Mbit/s  
95th percentile per-packet one-way delay: 80.978 ms  
Loss rate: 0.18%  
-- Flow 2:  
Average throughput: 33.45 Mbit/s  
95th percentile per-packet one-way delay: 84.276 ms  
Loss rate: 0.33%  
-- Flow 3:  
Average throughput: 23.95 Mbit/s  
95th percentile per-packet one-way delay: 84.385 ms  
Loss rate: 1.12%

Run 3: Report of Copa — Data Link



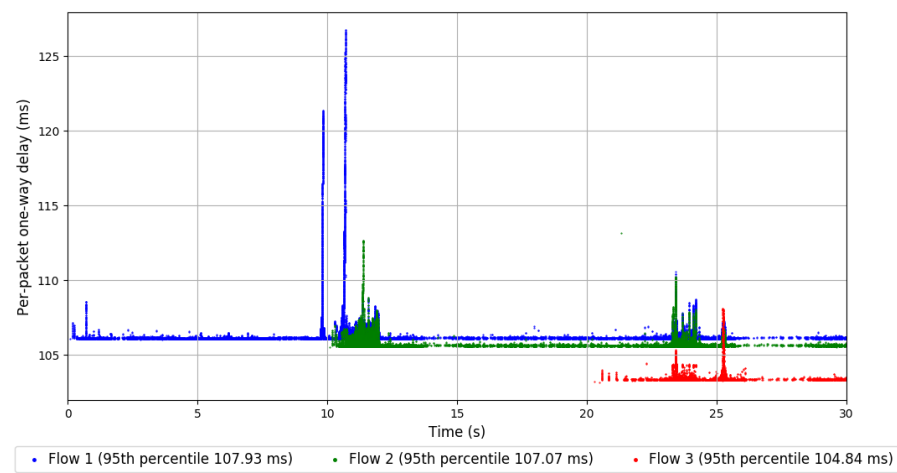
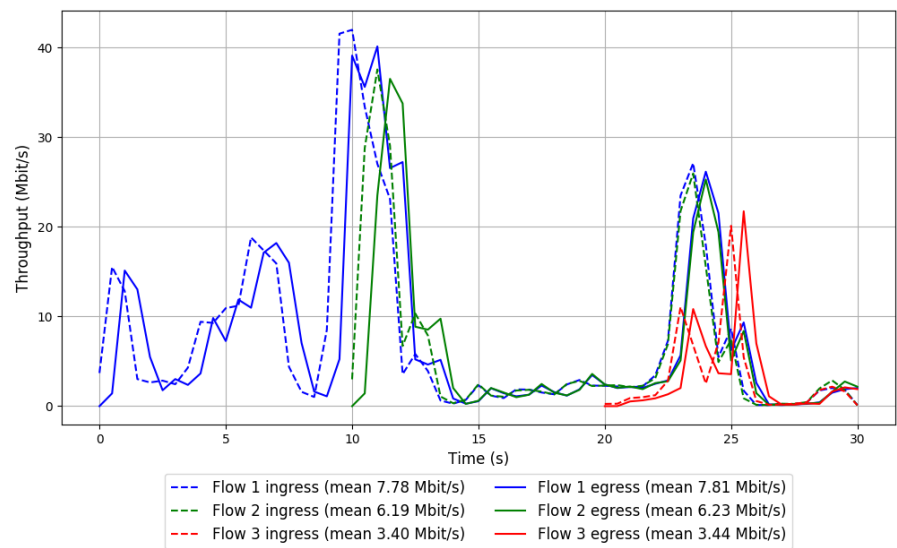


Run 4: Statistics of Copa

Start at: 2018-12-20 09:22:36  
End at: 2018-12-20 09:23:06  
Local clock offset: -2.353 ms  
Remote clock offset: -37.356 ms

# Below is generated by plot.py at 2018-12-20 09:58:58  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 13.07 Mbit/s  
95th percentile per-packet one-way delay: 107.352 ms  
Loss rate: 0.13%  
-- Flow 1:  
Average throughput: 7.81 Mbit/s  
95th percentile per-packet one-way delay: 107.927 ms  
Loss rate: 0.07%  
-- Flow 2:  
Average throughput: 6.23 Mbit/s  
95th percentile per-packet one-way delay: 107.072 ms  
Loss rate: 0.14%  
-- Flow 3:  
Average throughput: 3.44 Mbit/s  
95th percentile per-packet one-way delay: 104.840 ms  
Loss rate: 0.45%

Run 4: Report of Copa — Data Link

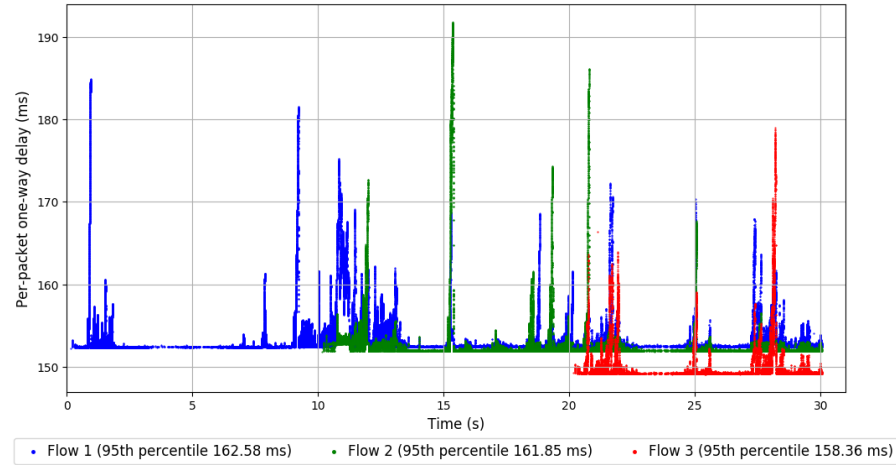
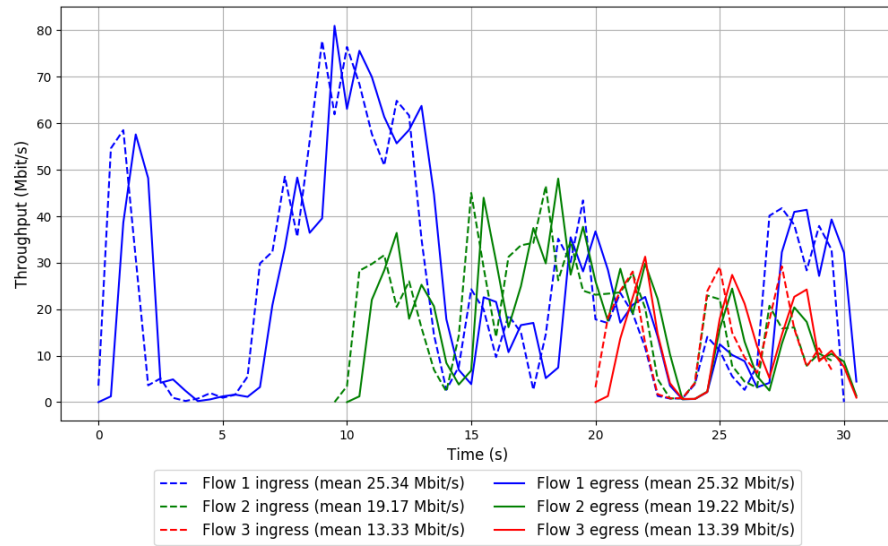


Run 5: Statistics of Copa

Start at: 2018-12-20 09:47:52  
End at: 2018-12-20 09:48:22  
Local clock offset: 1.959 ms  
Remote clock offset: -74.891 ms

# Below is generated by plot.py at 2018-12-20 09:59:13  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 42.55 Mbit/s  
95th percentile per-packet one-way delay: 161.947 ms  
Loss rate: 0.35%  
-- Flow 1:  
Average throughput: 25.32 Mbit/s  
95th percentile per-packet one-way delay: 162.582 ms  
Loss rate: 0.40%  
-- Flow 2:  
Average throughput: 19.22 Mbit/s  
95th percentile per-packet one-way delay: 161.850 ms  
Loss rate: 0.20%  
-- Flow 3:  
Average throughput: 13.39 Mbit/s  
95th percentile per-packet one-way delay: 158.356 ms  
Loss rate: 0.54%

## Run 5: Report of Copa — Data Link

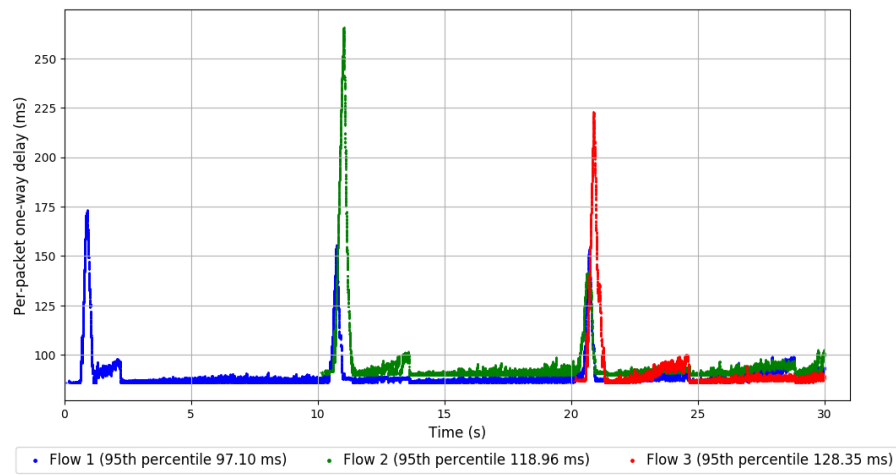
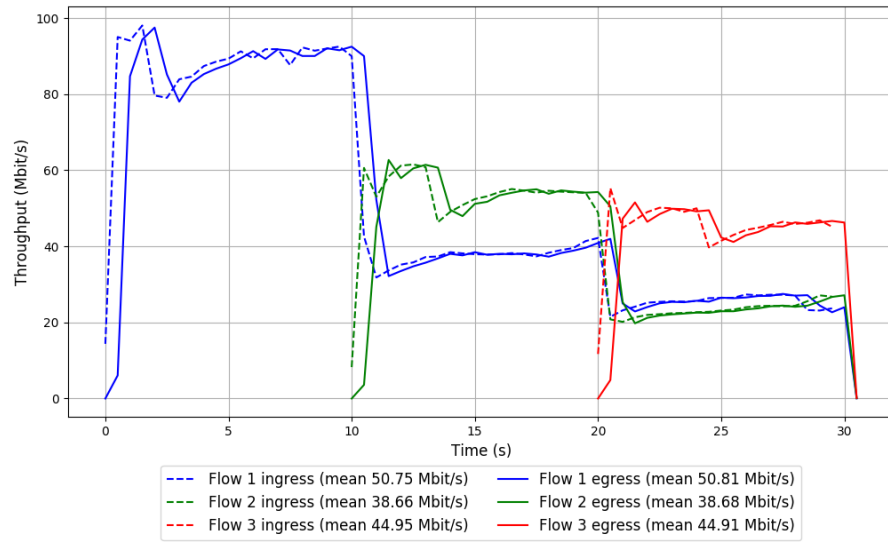


Run 1: Statistics of TCP Cubic

Start at: 2018-12-20 08:03:23  
End at: 2018-12-20 08:03:53  
Local clock offset: -0.584 ms  
Remote clock offset: -20.396 ms

# Below is generated by plot.py at 2018-12-20 09:59:21  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 91.39 Mbit/s  
95th percentile per-packet one-way delay: 104.775 ms  
Loss rate: 0.31%  
-- Flow 1:  
Average throughput: 50.81 Mbit/s  
95th percentile per-packet one-way delay: 97.099 ms  
Loss rate: 0.15%  
-- Flow 2:  
Average throughput: 38.68 Mbit/s  
95th percentile per-packet one-way delay: 118.956 ms  
Loss rate: 0.34%  
-- Flow 3:  
Average throughput: 44.91 Mbit/s  
95th percentile per-packet one-way delay: 128.351 ms  
Loss rate: 0.83%

## Run 1: Report of TCP Cubic — Data Link

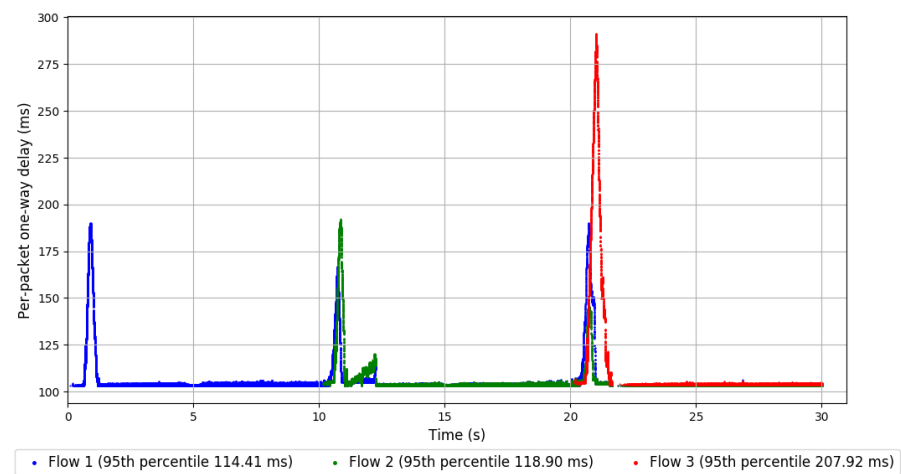
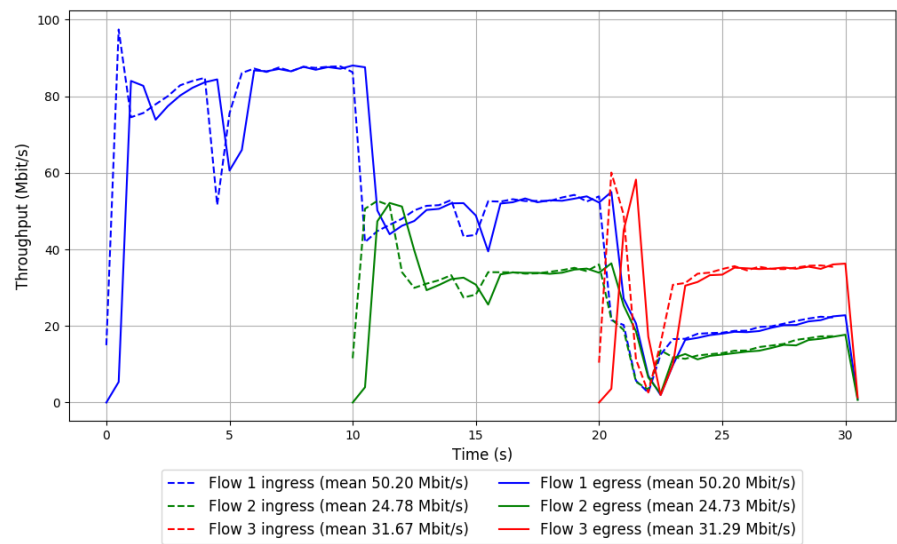


Run 2: Statistics of TCP Cubic

Start at: 2018-12-20 08:27:45  
End at: 2018-12-20 08:28:15  
Local clock offset: -0.971 ms  
Remote clock offset: -37.637 ms

# Below is generated by plot.py at 2018-12-20 09:59:21  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 76.99 Mbit/s  
95th percentile per-packet one-way delay: 126.595 ms  
Loss rate: 0.54%  
-- Flow 1:  
Average throughput: 50.20 Mbit/s  
95th percentile per-packet one-way delay: 114.412 ms  
Loss rate: 0.24%  
-- Flow 2:  
Average throughput: 24.73 Mbit/s  
95th percentile per-packet one-way delay: 118.899 ms  
Loss rate: 0.59%  
-- Flow 3:  
Average throughput: 31.29 Mbit/s  
95th percentile per-packet one-way delay: 207.921 ms  
Loss rate: 1.92%

Run 2: Report of TCP Cubic — Data Link



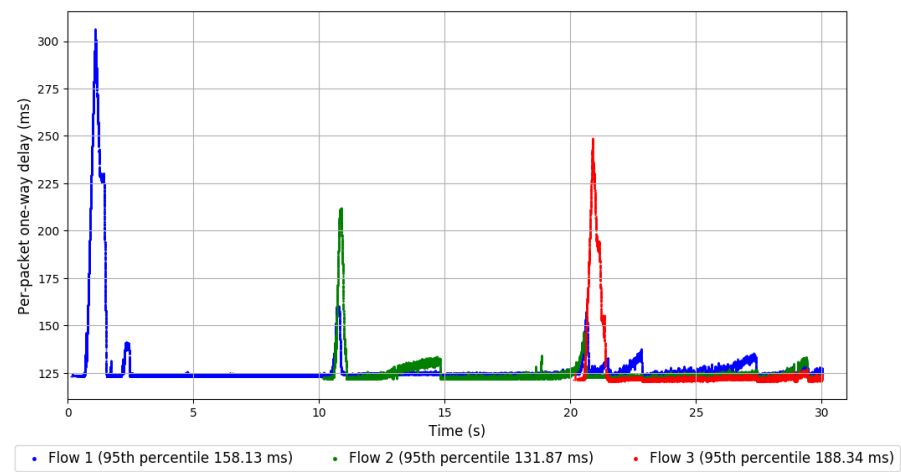
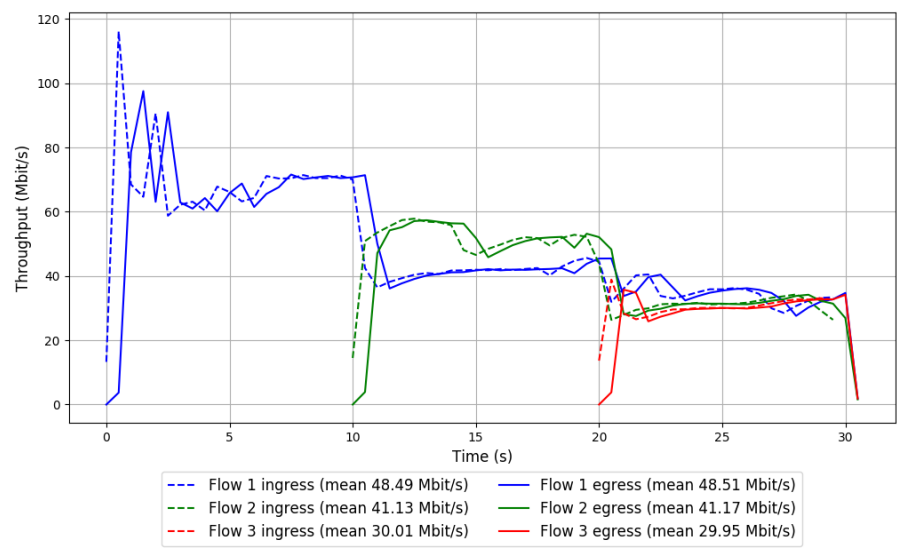


Run 3: Statistics of TCP Cubic

Start at: 2018-12-20 08:52:00  
End at: 2018-12-20 08:52:30  
Local clock offset: -0.468 ms  
Remote clock offset: -56.262 ms

# Below is generated by plot.py at 2018-12-20 09:59:21  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 85.83 Mbit/s  
95th percentile per-packet one-way delay: 145.402 ms  
Loss rate: 0.31%  
-- Flow 1:  
Average throughput: 48.51 Mbit/s  
95th percentile per-packet one-way delay: 158.127 ms  
Loss rate: 0.21%  
-- Flow 2:  
Average throughput: 41.17 Mbit/s  
95th percentile per-packet one-way delay: 131.869 ms  
Loss rate: 0.27%  
-- Flow 3:  
Average throughput: 29.95 Mbit/s  
95th percentile per-packet one-way delay: 188.336 ms  
Loss rate: 0.90%

Run 3: Report of TCP Cubic — Data Link



Run 4: Statistics of TCP Cubic

Start at: 2018-12-20 09:17:39

End at: 2018-12-20 09:18:09

Local clock offset: 0.956 ms

Remote clock offset: -7.47 ms

# Below is generated by plot.py at 2018-12-20 09:59:21

# Datalink statistics

-- Total of 3 flows:

Average throughput: 64.85 Mbit/s

95th percentile per-packet one-way delay: 121.684 ms

Loss rate: 0.44%

-- Flow 1:

Average throughput: 38.86 Mbit/s

95th percentile per-packet one-way delay: 166.120 ms

Loss rate: 0.27%

-- Flow 2:

Average throughput: 31.47 Mbit/s

95th percentile per-packet one-way delay: 93.494 ms

Loss rate: 0.42%

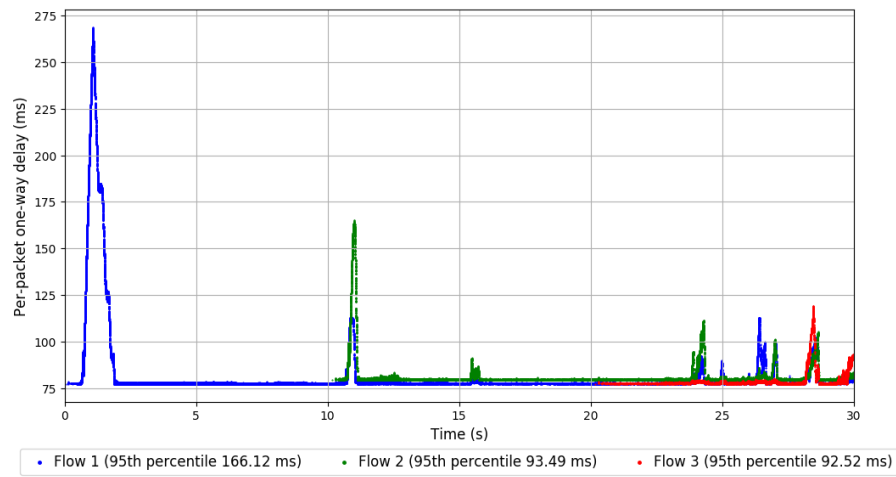
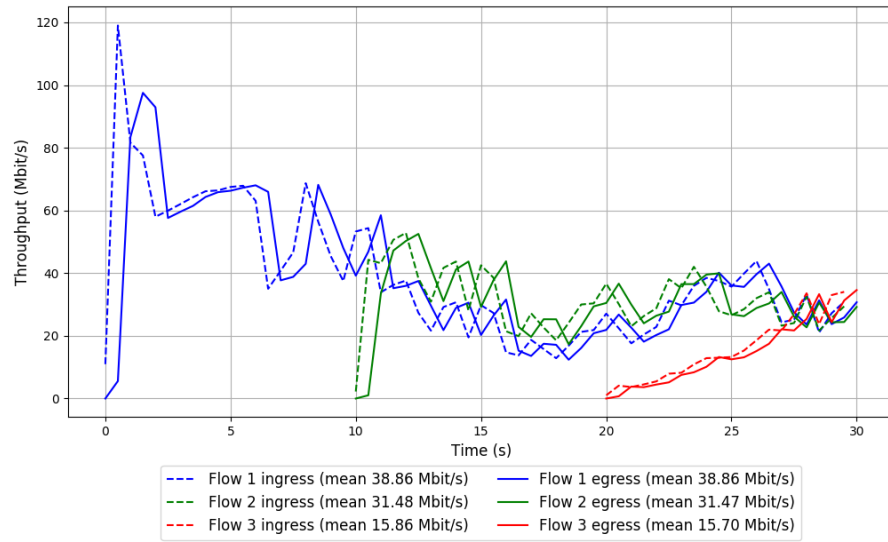
-- Flow 3:

Average throughput: 15.70 Mbit/s

95th percentile per-packet one-way delay: 92.517 ms

Loss rate: 1.81%

# Run 4: Report of TCP Cubic — Data Link

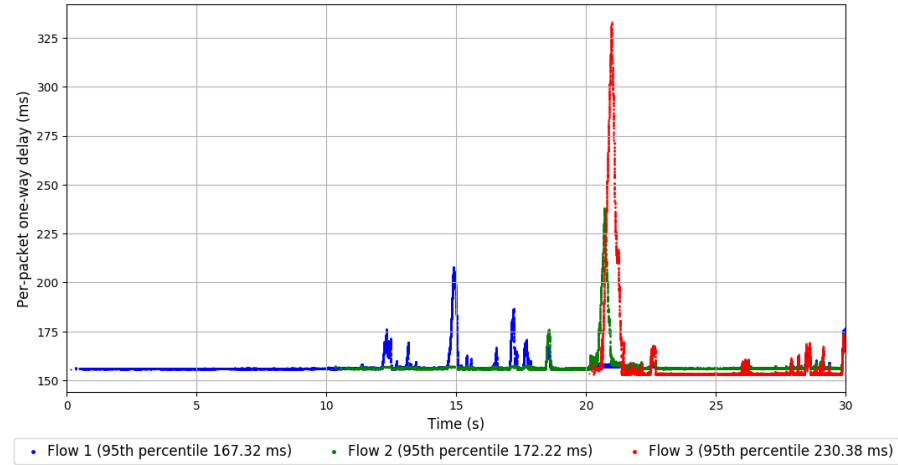
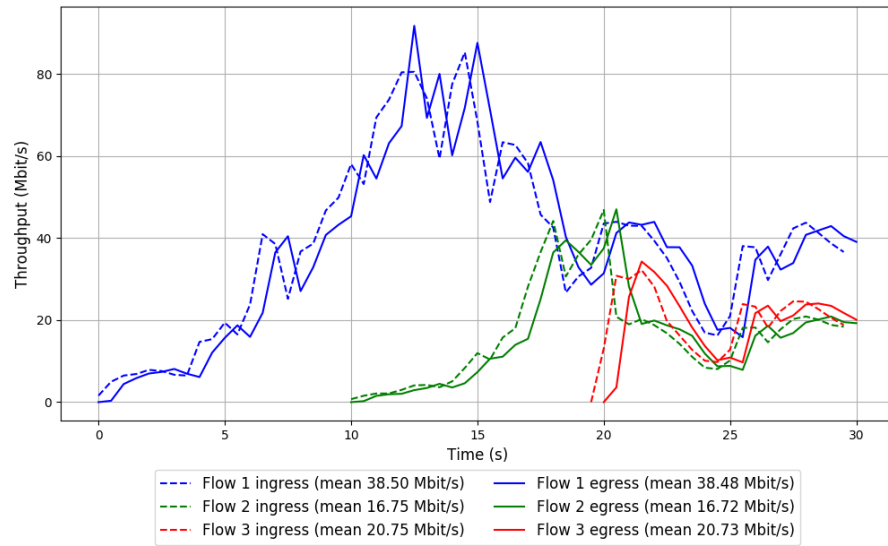


Run 5: Statistics of TCP Cubic

Start at: 2018-12-20 09:42:37  
End at: 2018-12-20 09:43:07  
Local clock offset: 1.109 ms  
Remote clock offset: -80.493 ms

# Below is generated by plot.py at 2018-12-20 09:59:29  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 56.45 Mbit/s  
95th percentile per-packet one-way delay: 169.834 ms  
Loss rate: 0.58%  
-- Flow 1:  
Average throughput: 38.48 Mbit/s  
95th percentile per-packet one-way delay: 167.318 ms  
Loss rate: 0.40%  
-- Flow 2:  
Average throughput: 16.72 Mbit/s  
95th percentile per-packet one-way delay: 172.225 ms  
Loss rate: 0.75%  
-- Flow 3:  
Average throughput: 20.73 Mbit/s  
95th percentile per-packet one-way delay: 230.383 ms  
Loss rate: 1.28%

# Run 5: Report of TCP Cubic — Data Link

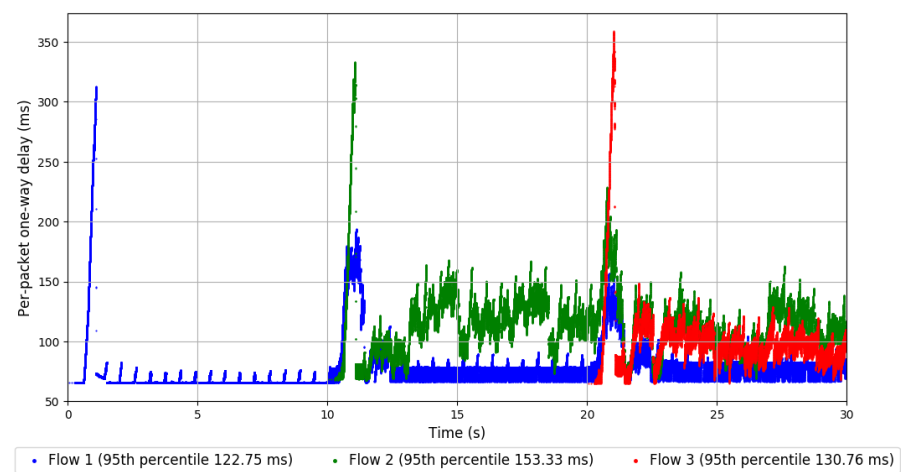
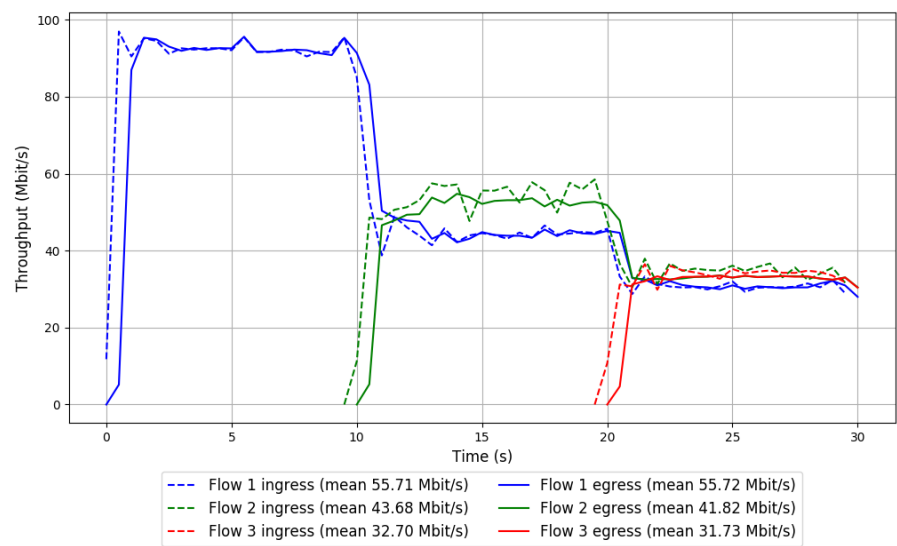


Run 1: Statistics of FillP

Start at: 2018-12-20 07:57:53  
End at: 2018-12-20 07:58:23  
Local clock offset: -2.392 ms  
Remote clock offset: -0.855 ms

# Below is generated by plot.py at 2018-12-20 10:00:07  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 94.05 Mbit/s  
95th percentile per-packet one-way delay: 144.171 ms  
Loss rate: 1.95%  
-- Flow 1:  
Average throughput: 55.72 Mbit/s  
95th percentile per-packet one-way delay: 122.754 ms  
Loss rate: 0.23%  
-- Flow 2:  
Average throughput: 41.82 Mbit/s  
95th percentile per-packet one-way delay: 153.328 ms  
Loss rate: 4.59%  
-- Flow 3:  
Average throughput: 31.73 Mbit/s  
95th percentile per-packet one-way delay: 130.760 ms  
Loss rate: 3.69%

Run 1: Report of FillP — Data Link



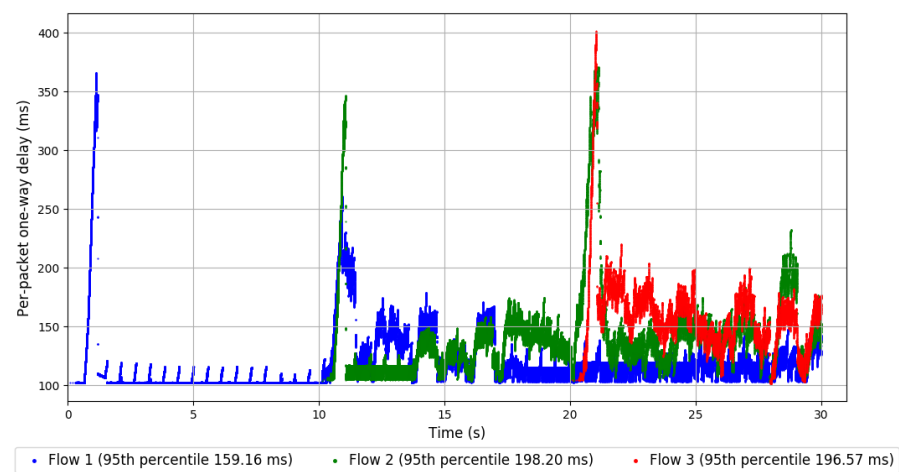
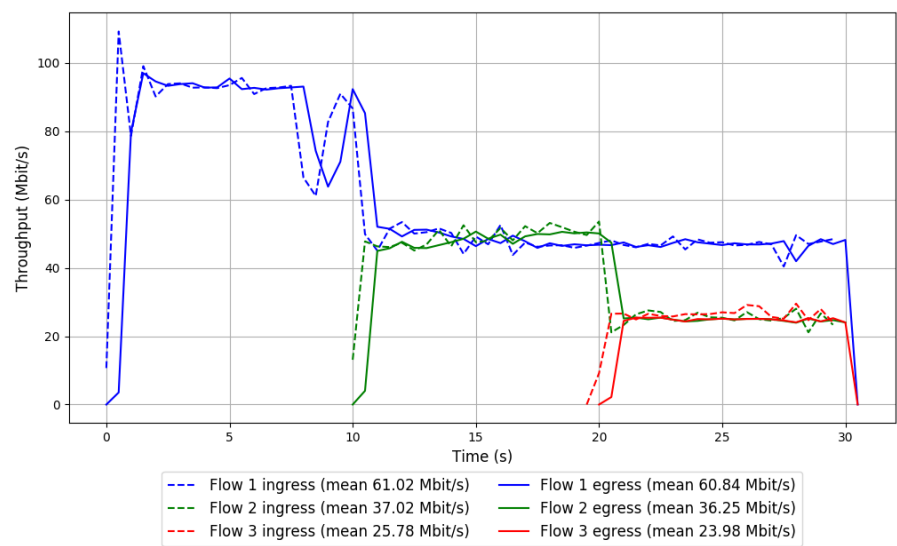


Run 2: Statistics of FillP

Start at: 2018-12-20 08:22:14  
End at: 2018-12-20 08:22:44  
Local clock offset: 0.378 ms  
Remote clock offset: -33.072 ms

# Below is generated by plot.py at 2018-12-20 10:00:17  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 92.88 Mbit/s  
95th percentile per-packet one-way delay: 184.392 ms  
Loss rate: 1.65%  
-- Flow 1:  
Average throughput: 60.84 Mbit/s  
95th percentile per-packet one-way delay: 159.163 ms  
Loss rate: 0.52%  
-- Flow 2:  
Average throughput: 36.25 Mbit/s  
95th percentile per-packet one-way delay: 198.201 ms  
Loss rate: 2.41%  
-- Flow 3:  
Average throughput: 23.98 Mbit/s  
95th percentile per-packet one-way delay: 196.566 ms  
Loss rate: 7.52%

Run 2: Report of FillP — Data Link

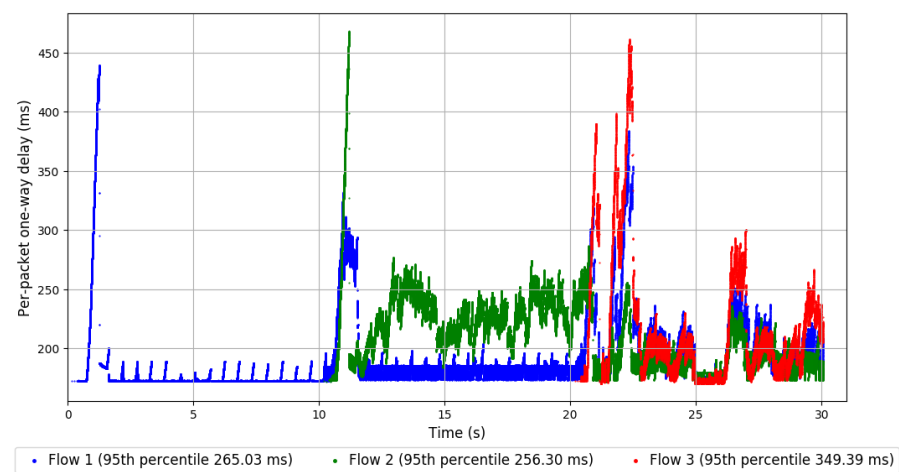
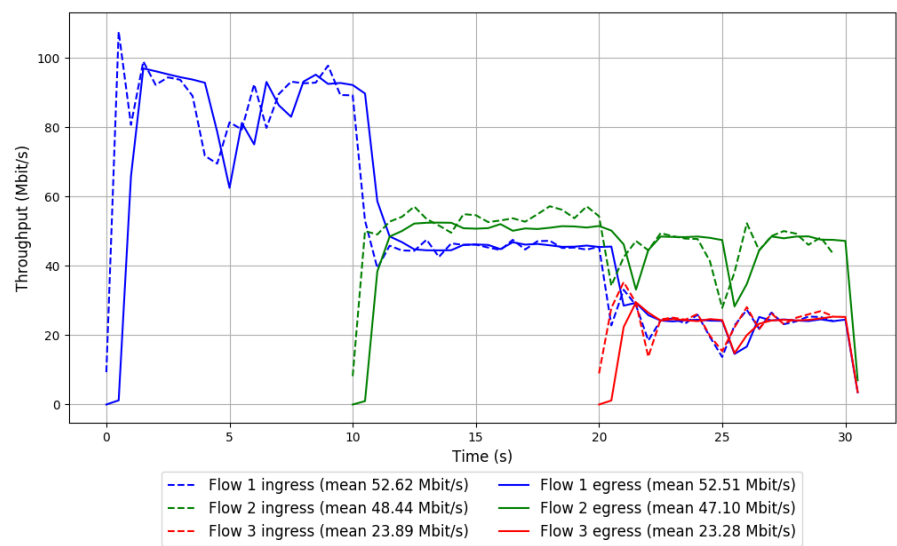


Run 3: Statistics of FillP

Start at: 2018-12-20 08:46:32  
End at: 2018-12-20 08:47:02  
Local clock offset: 1.612 ms  
Remote clock offset: -101.839 ms

# Below is generated by plot.py at 2018-12-20 10:00:24  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 91.54 Mbit/s  
95th percentile per-packet one-way delay: 266.913 ms  
Loss rate: 1.59%  
-- Flow 1:  
Average throughput: 52.51 Mbit/s  
95th percentile per-packet one-way delay: 265.029 ms  
Loss rate: 0.41%  
-- Flow 2:  
Average throughput: 47.10 Mbit/s  
95th percentile per-packet one-way delay: 256.299 ms  
Loss rate: 3.10%  
-- Flow 3:  
Average throughput: 23.28 Mbit/s  
95th percentile per-packet one-way delay: 349.393 ms  
Loss rate: 3.27%

Run 3: Report of FillP — Data Link

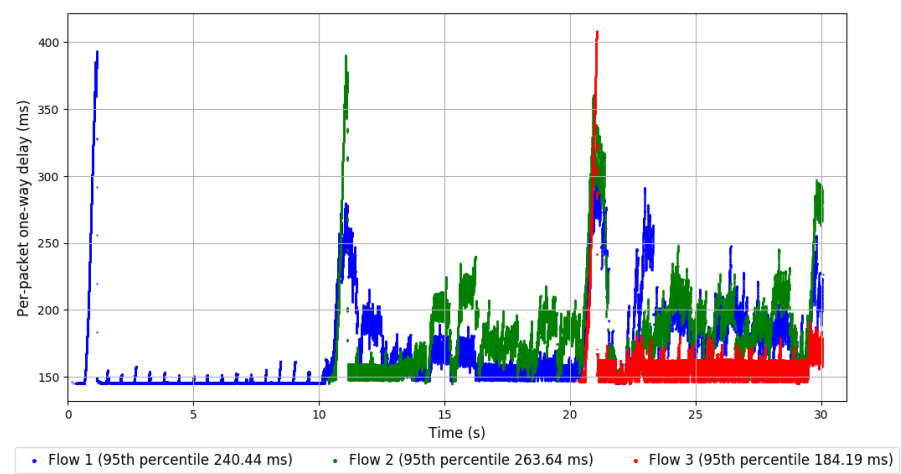
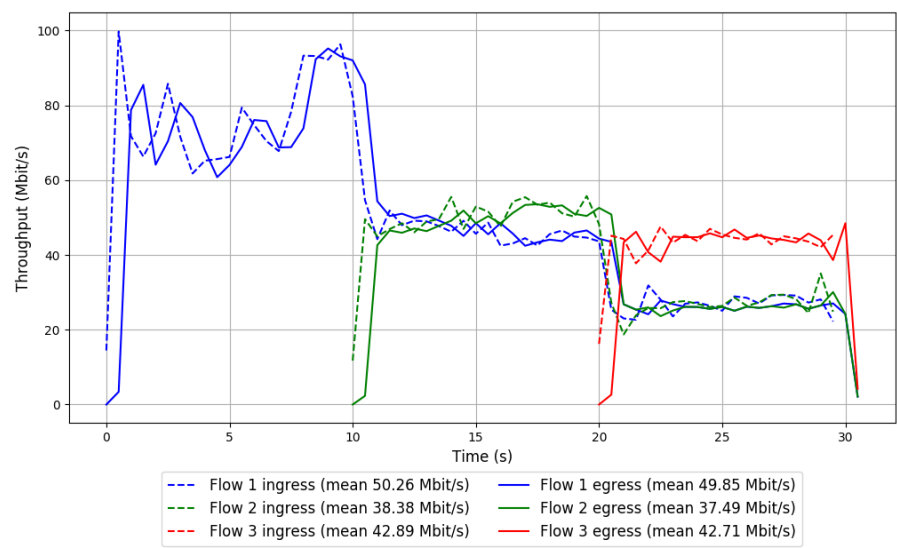


Run 4: Statistics of FillP

Start at: 2018-12-20 09:12:10  
End at: 2018-12-20 09:12:40  
Local clock offset: 0.114 ms  
Remote clock offset: -76.441 ms

# Below is generated by plot.py at 2018-12-20 10:00:24  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 88.94 Mbit/s  
95th percentile per-packet one-way delay: 238.864 ms  
Loss rate: 1.49%  
-- Flow 1:  
Average throughput: 49.85 Mbit/s  
95th percentile per-packet one-way delay: 240.435 ms  
Loss rate: 1.00%  
-- Flow 2:  
Average throughput: 37.49 Mbit/s  
95th percentile per-packet one-way delay: 263.639 ms  
Loss rate: 2.68%  
-- Flow 3:  
Average throughput: 42.71 Mbit/s  
95th percentile per-packet one-way delay: 184.190 ms  
Loss rate: 1.10%

Run 4: Report of FillP — Data Link

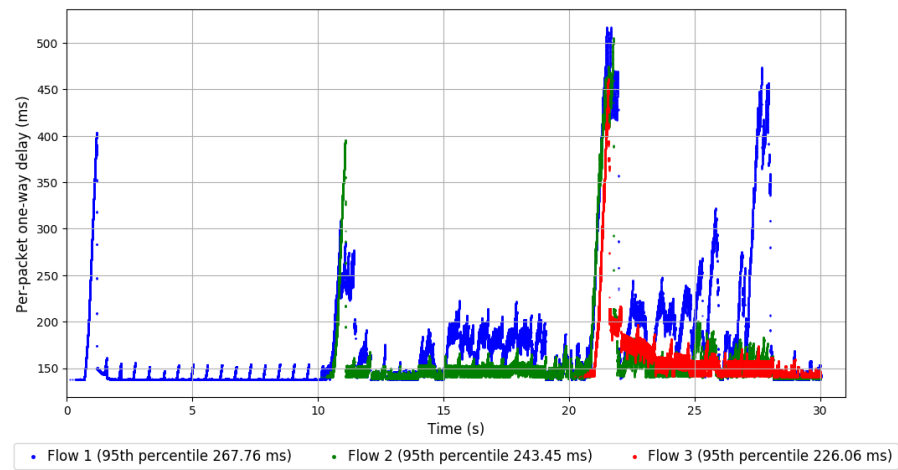
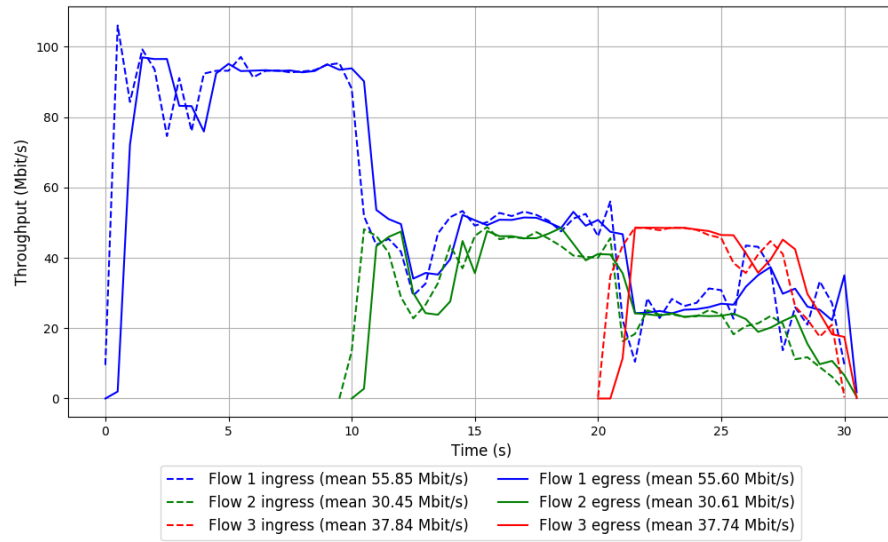


Run 5: Statistics of FillP

Start at: 2018-12-20 09:36:56  
End at: 2018-12-20 09:37:26  
Local clock offset: -2.134 ms  
Remote clock offset: -68.992 ms

# Below is generated by plot.py at 2018-12-20 10:00:25  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 88.29 Mbit/s  
95th percentile per-packet one-way delay: 262.673 ms  
Loss rate: 1.05%  
-- Flow 1:  
Average throughput: 55.60 Mbit/s  
95th percentile per-packet one-way delay: 267.756 ms  
Loss rate: 1.10%  
-- Flow 2:  
Average throughput: 30.61 Mbit/s  
95th percentile per-packet one-way delay: 243.454 ms  
Loss rate: 0.54%  
-- Flow 3:  
Average throughput: 37.74 Mbit/s  
95th percentile per-packet one-way delay: 226.055 ms  
Loss rate: 1.70%

## Run 5: Report of FillP — Data Link



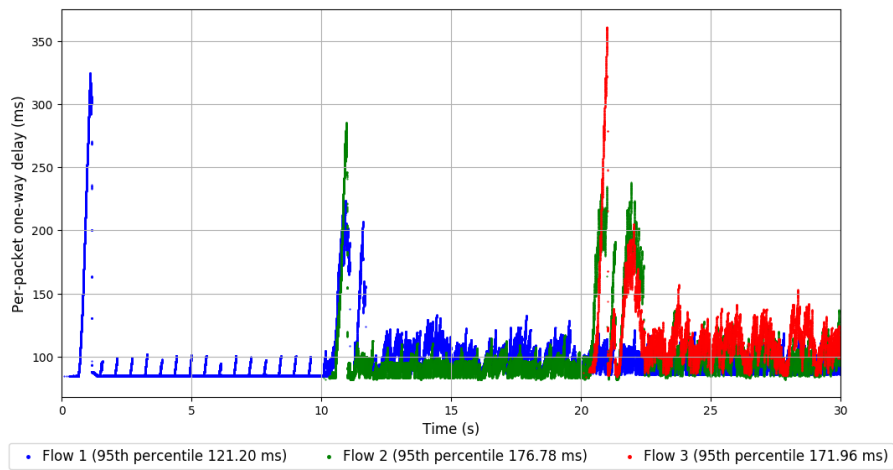
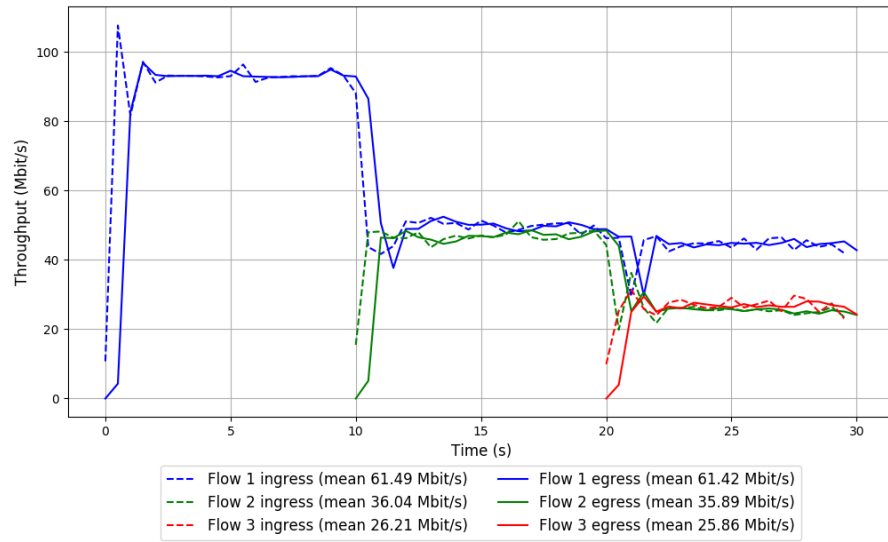


Run 1: Statistics of FillP-Sheep

Start at: 2018-12-20 08:05:58  
End at: 2018-12-20 08:06:28  
Local clock offset: -0.705 ms  
Remote clock offset: -15.294 ms

# Below is generated by plot.py at 2018-12-20 10:00:35  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 93.85 Mbit/s  
95th percentile per-packet one-way delay: 147.241 ms  
Loss rate: 0.58%  
-- Flow 1:  
Average throughput: 61.42 Mbit/s  
95th percentile per-packet one-way delay: 121.204 ms  
Loss rate: 0.31%  
-- Flow 2:  
Average throughput: 35.89 Mbit/s  
95th percentile per-packet one-way delay: 176.778 ms  
Loss rate: 0.73%  
-- Flow 3:  
Average throughput: 25.86 Mbit/s  
95th percentile per-packet one-way delay: 171.956 ms  
Loss rate: 2.11%

## Run 1: Report of FillP-Sheep — Data Link



Run 2: Statistics of FillP-Sheep

Start at: 2018-12-20 08:30:15

End at: 2018-12-20 08:30:45

Local clock offset: 0.85 ms

Remote clock offset: 0.325 ms

# Below is generated by plot.py at 2018-12-20 10:00:36

# Datalink statistics

-- Total of 3 flows:

Average throughput: 92.71 Mbit/s

95th percentile per-packet one-way delay: 144.034 ms

Loss rate: 0.85%

-- Flow 1:

Average throughput: 54.91 Mbit/s

95th percentile per-packet one-way delay: 122.758 ms

Loss rate: 0.57%

-- Flow 2:

Average throughput: 41.72 Mbit/s

95th percentile per-packet one-way delay: 184.352 ms

Loss rate: 1.33%

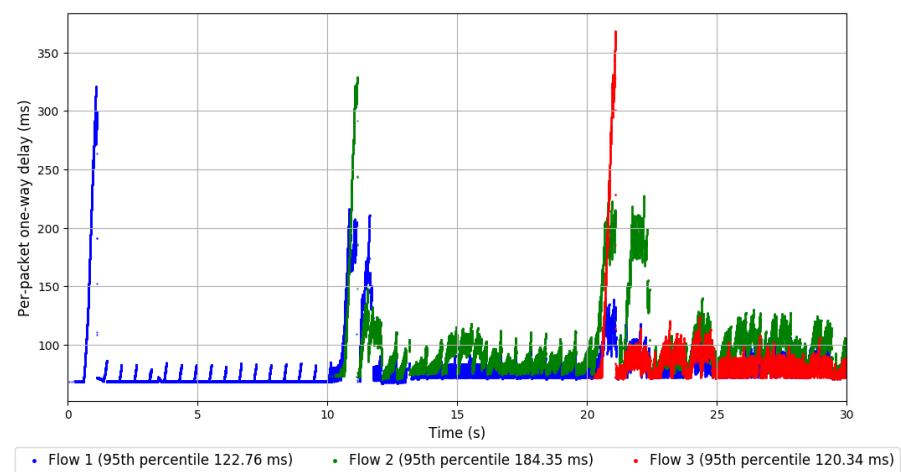
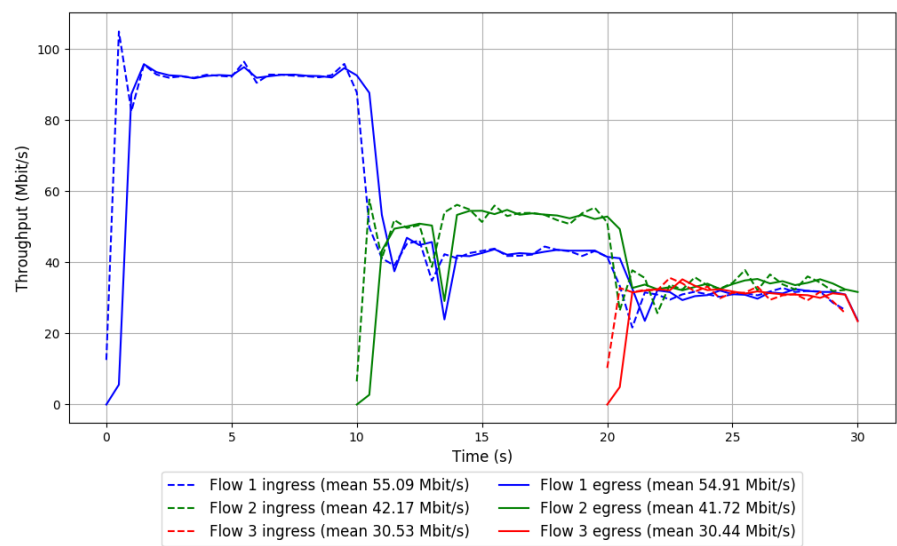
-- Flow 3:

Average throughput: 30.44 Mbit/s

95th percentile per-packet one-way delay: 120.339 ms

Loss rate: 0.98%

Run 2: Report of FillP-Sheep — Data Link

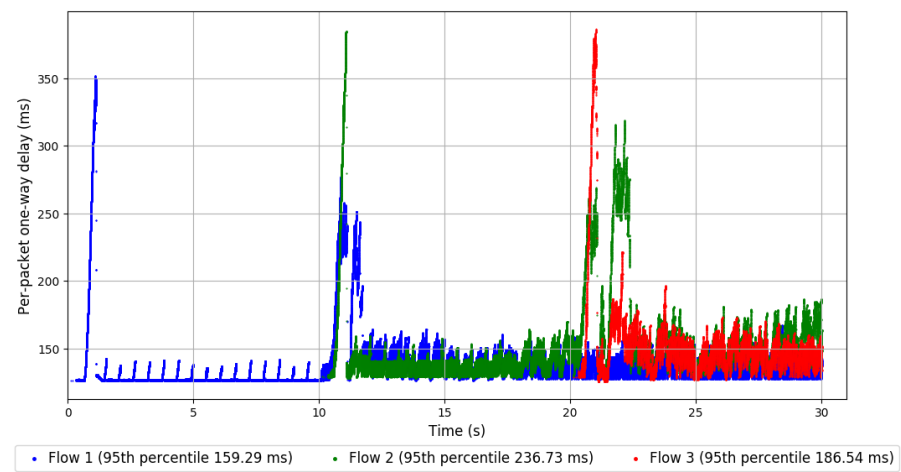
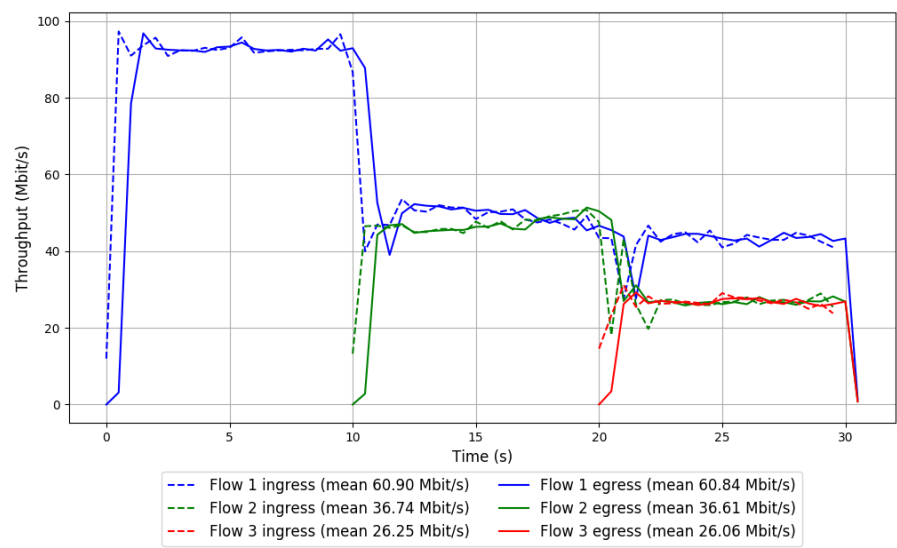


Run 3: Statistics of FillP-Sheep

Start at: 2018-12-20 08:54:29  
End at: 2018-12-20 08:54:59  
Local clock offset: -1.805 ms  
Remote clock offset: -62.47 ms

# Below is generated by plot.py at 2018-12-20 10:00:49  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 93.80 Mbit/s  
95th percentile per-packet one-way delay: 184.294 ms  
Loss rate: 0.51%  
-- Flow 1:  
Average throughput: 60.84 Mbit/s  
95th percentile per-packet one-way delay: 159.292 ms  
Loss rate: 0.31%  
-- Flow 2:  
Average throughput: 36.61 Mbit/s  
95th percentile per-packet one-way delay: 236.730 ms  
Loss rate: 0.70%  
-- Flow 3:  
Average throughput: 26.06 Mbit/s  
95th percentile per-packet one-way delay: 186.538 ms  
Loss rate: 1.39%

Run 3: Report of FillP-Sheep — Data Link

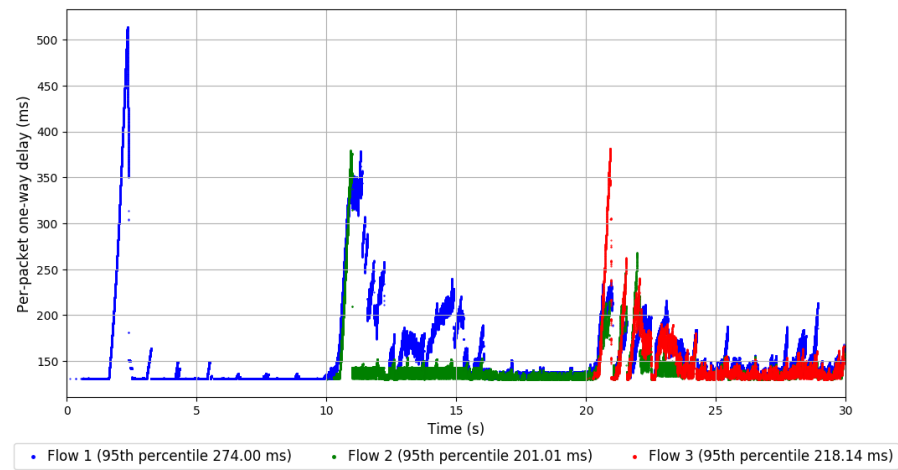
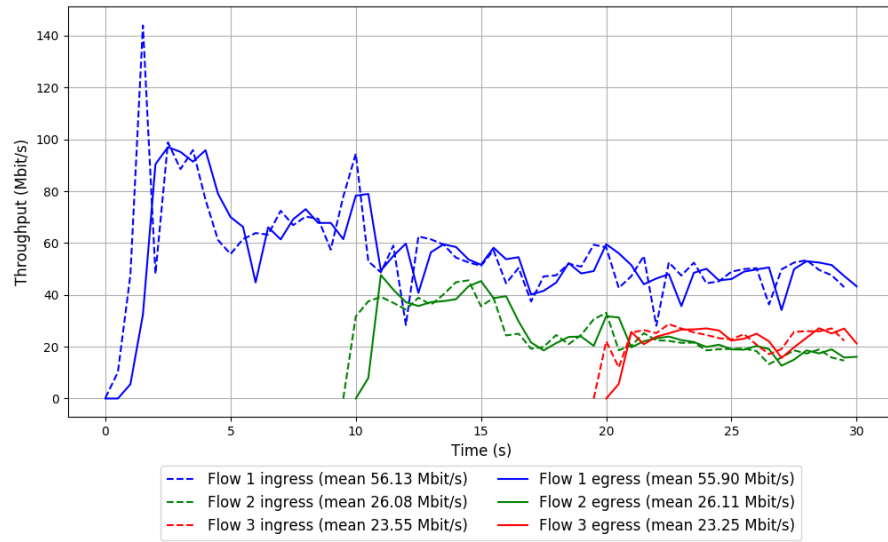


Run 4: Statistics of FillP-Sheep

Start at: 2018-12-20 09:20:07  
End at: 2018-12-20 09:20:37  
Local clock offset: -2.083 ms  
Remote clock offset: -63.482 ms

# Below is generated by plot.py at 2018-12-20 10:01:18  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 81.05 Mbit/s  
95th percentile per-packet one-way delay: 244.601 ms  
Loss rate: 0.84%  
-- Flow 1:  
Average throughput: 55.90 Mbit/s  
95th percentile per-packet one-way delay: 273.998 ms  
Loss rate: 0.73%  
-- Flow 2:  
Average throughput: 26.11 Mbit/s  
95th percentile per-packet one-way delay: 201.009 ms  
Loss rate: 0.42%  
-- Flow 3:  
Average throughput: 23.25 Mbit/s  
95th percentile per-packet one-way delay: 218.142 ms  
Loss rate: 2.55%

#### Run 4: Report of FillP-Sheep — Data Link



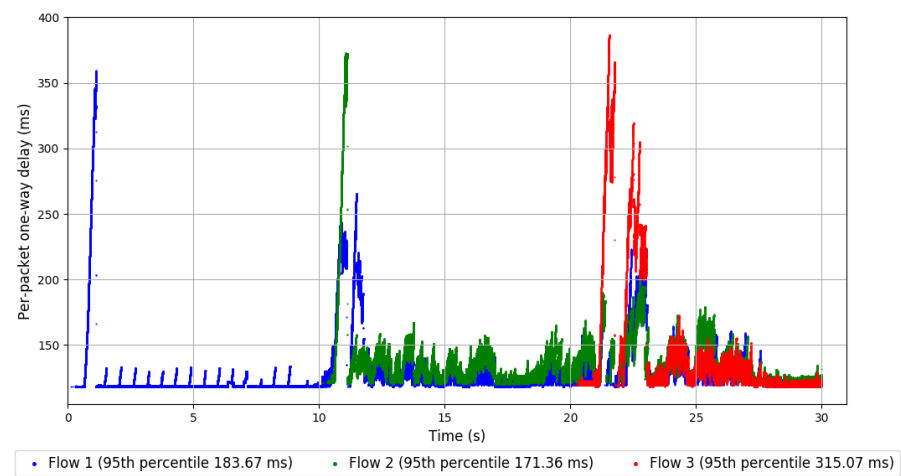
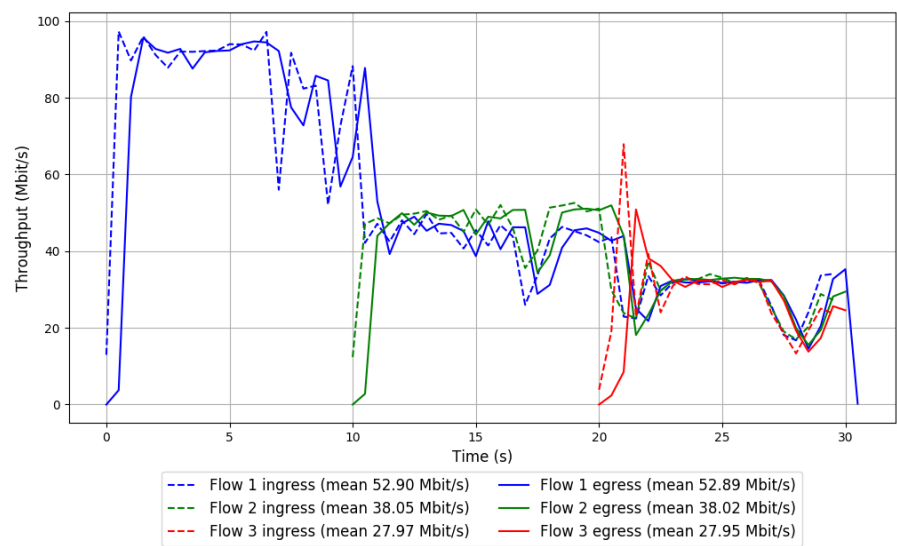


Run 5: Statistics of FillP-Sheep

Start at: 2018-12-20 09:45:09  
End at: 2018-12-20 09:45:39  
Local clock offset: 2.262 ms  
Remote clock offset: -43.27 ms

# Below is generated by plot.py at 2018-12-20 10:01:30  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 87.39 Mbit/s  
95th percentile per-packet one-way delay: 201.072 ms  
Loss rate: 0.41%  
-- Flow 1:  
Average throughput: 52.89 Mbit/s  
95th percentile per-packet one-way delay: 183.666 ms  
Loss rate: 0.26%  
-- Flow 2:  
Average throughput: 38.02 Mbit/s  
95th percentile per-packet one-way delay: 171.356 ms  
Loss rate: 0.48%  
-- Flow 3:  
Average throughput: 27.95 Mbit/s  
95th percentile per-packet one-way delay: 315.066 ms  
Loss rate: 1.06%

Run 5: Report of FillP-Sheep — Data Link

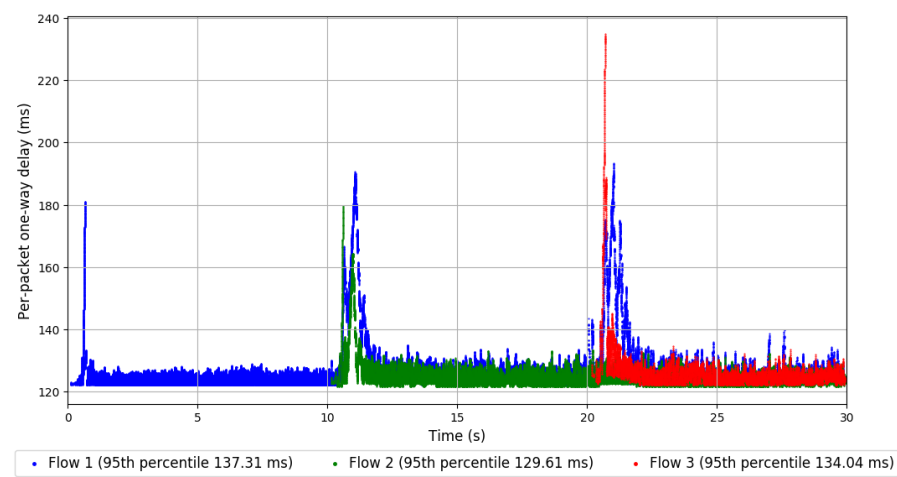
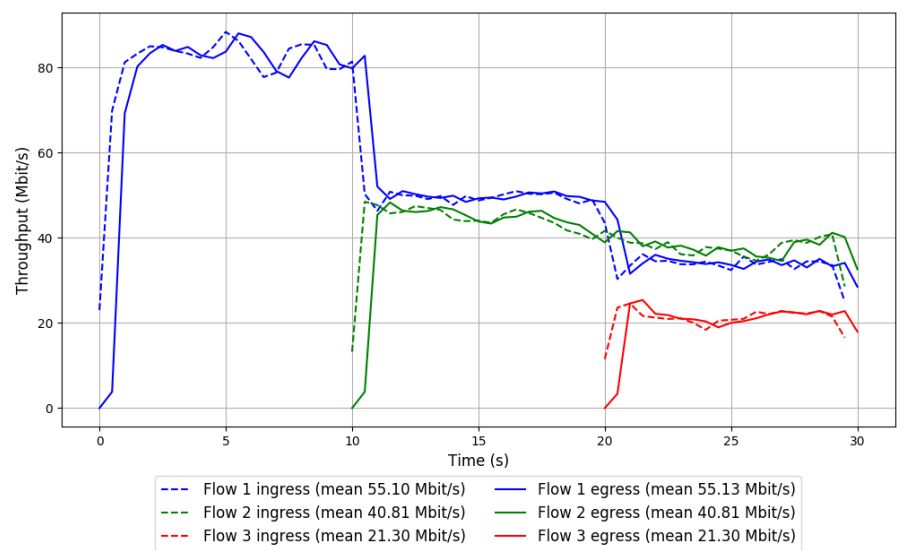


Run 1: Statistics of Indigo

Start at: 2018-12-20 08:11:06  
End at: 2018-12-20 08:11:36  
Local clock offset: -0.61 ms  
Remote clock offset: -55.895 ms

# Below is generated by plot.py at 2018-12-20 10:01:30  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 89.19 Mbit/s  
95th percentile per-packet one-way delay: 133.201 ms  
Loss rate: 0.30%  
-- Flow 1:  
Average throughput: 55.13 Mbit/s  
95th percentile per-packet one-way delay: 137.306 ms  
Loss rate: 0.19%  
-- Flow 2:  
Average throughput: 40.81 Mbit/s  
95th percentile per-packet one-way delay: 129.610 ms  
Loss rate: 0.37%  
-- Flow 3:  
Average throughput: 21.30 Mbit/s  
95th percentile per-packet one-way delay: 134.042 ms  
Loss rate: 0.81%

Run 1: Report of Indigo — Data Link

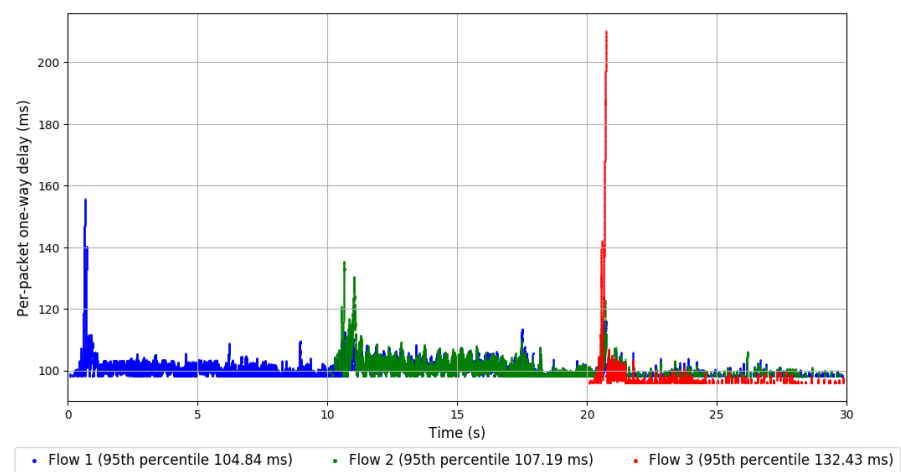
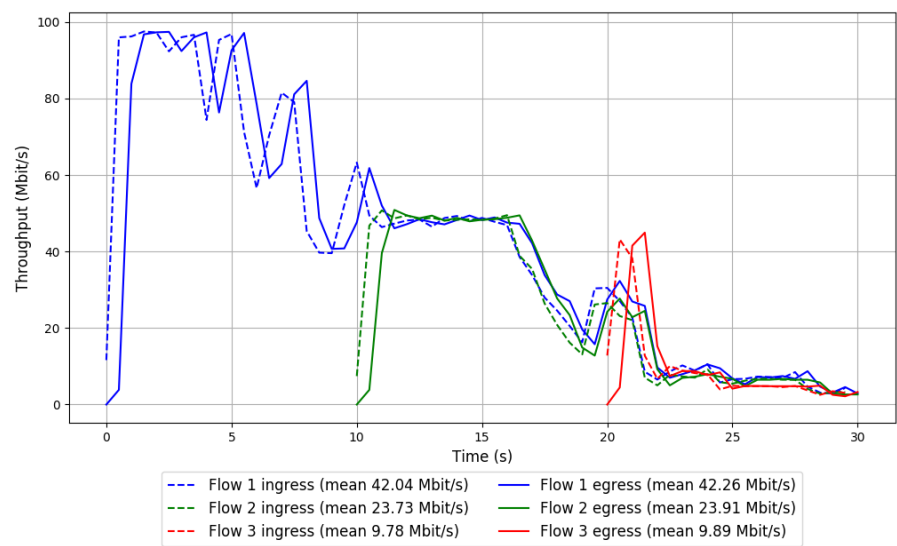


Run 2: Statistics of Indigo

Start at: 2018-12-20 08:35:26  
End at: 2018-12-20 08:35:56  
Local clock offset: 0.4 ms  
Remote clock offset: -25.831 ms

# Below is generated by plot.py at 2018-12-20 10:01:30  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 61.21 Mbit/s  
95th percentile per-packet one-way delay: 105.616 ms  
Loss rate: 0.11%  
-- Flow 1:  
Average throughput: 42.26 Mbit/s  
95th percentile per-packet one-way delay: 104.837 ms  
Loss rate: 0.06%  
-- Flow 2:  
Average throughput: 23.91 Mbit/s  
95th percentile per-packet one-way delay: 107.193 ms  
Loss rate: 0.14%  
-- Flow 3:  
Average throughput: 9.89 Mbit/s  
95th percentile per-packet one-way delay: 132.428 ms  
Loss rate: 0.57%

Run 2: Report of Indigo — Data Link

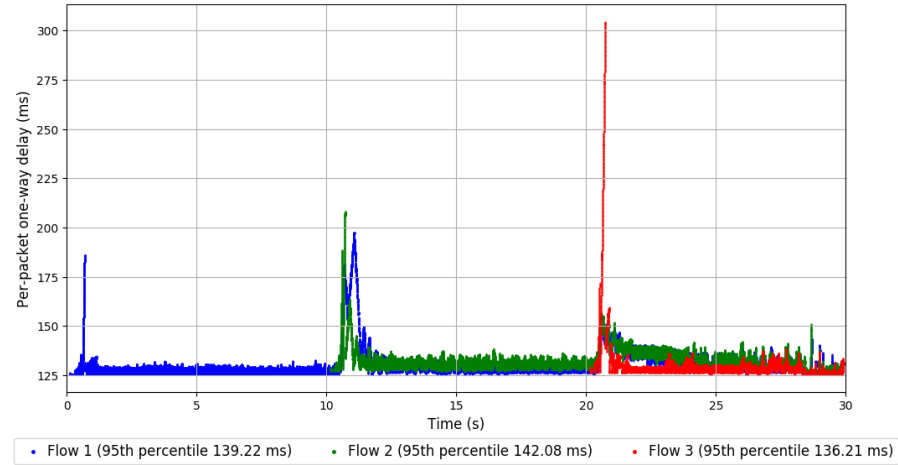
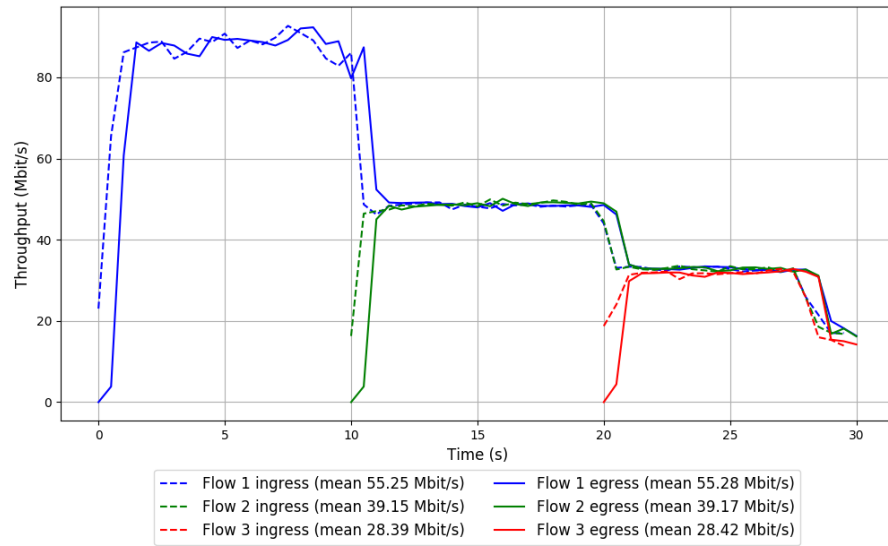


Run 3: Statistics of Indigo

Start at: 2018-12-20 09:00:01  
End at: 2018-12-20 09:00:31  
Local clock offset: -0.651 ms  
Remote clock offset: -57.597 ms

# Below is generated by plot.py at 2018-12-20 10:01:30  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 90.56 Mbit/s  
95th percentile per-packet one-way delay: 140.136 ms  
Loss rate: 0.28%  
-- Flow 1:  
Average throughput: 55.28 Mbit/s  
95th percentile per-packet one-way delay: 139.216 ms  
Loss rate: 0.19%  
-- Flow 2:  
Average throughput: 39.17 Mbit/s  
95th percentile per-packet one-way delay: 142.080 ms  
Loss rate: 0.33%  
-- Flow 3:  
Average throughput: 28.42 Mbit/s  
95th percentile per-packet one-way delay: 136.208 ms  
Loss rate: 0.70%

### Run 3: Report of Indigo — Data Link



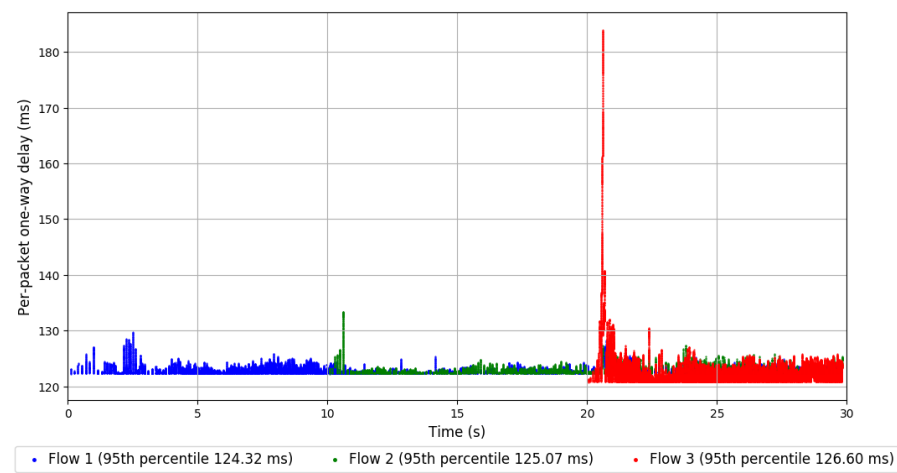
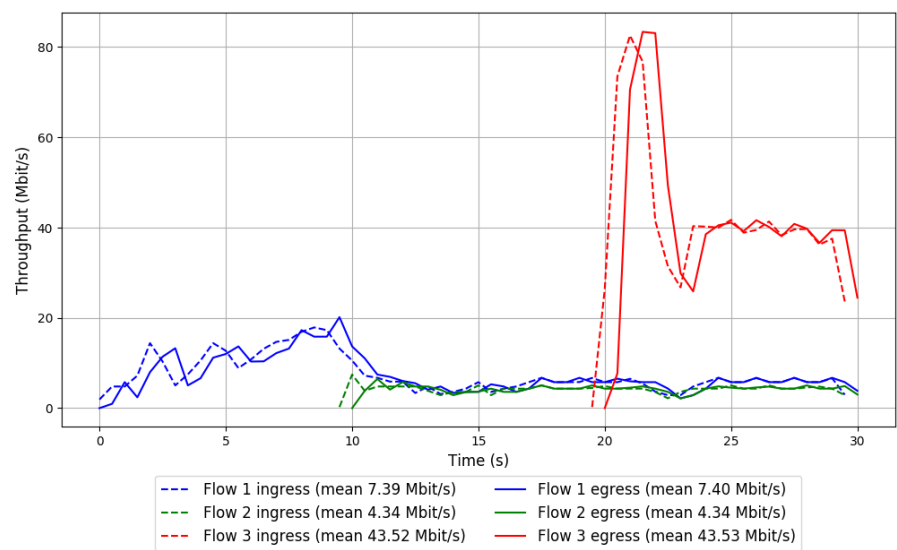


Run 4: Statistics of Indigo

Start at: 2018-12-20 09:25:09  
End at: 2018-12-20 09:25:39  
Local clock offset: -3.032 ms  
Remote clock offset: -54.691 ms

# Below is generated by plot.py at 2018-12-20 10:01:30  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 24.58 Mbit/s  
95th percentile per-packet one-way delay: 125.322 ms  
Loss rate: 0.56%  
-- Flow 1:  
Average throughput: 7.40 Mbit/s  
95th percentile per-packet one-way delay: 124.323 ms  
Loss rate: 0.22%  
-- Flow 2:  
Average throughput: 4.34 Mbit/s  
95th percentile per-packet one-way delay: 125.068 ms  
Loss rate: 0.42%  
-- Flow 3:  
Average throughput: 43.53 Mbit/s  
95th percentile per-packet one-way delay: 126.603 ms  
Loss rate: 0.77%

Run 4: Report of Indigo — Data Link

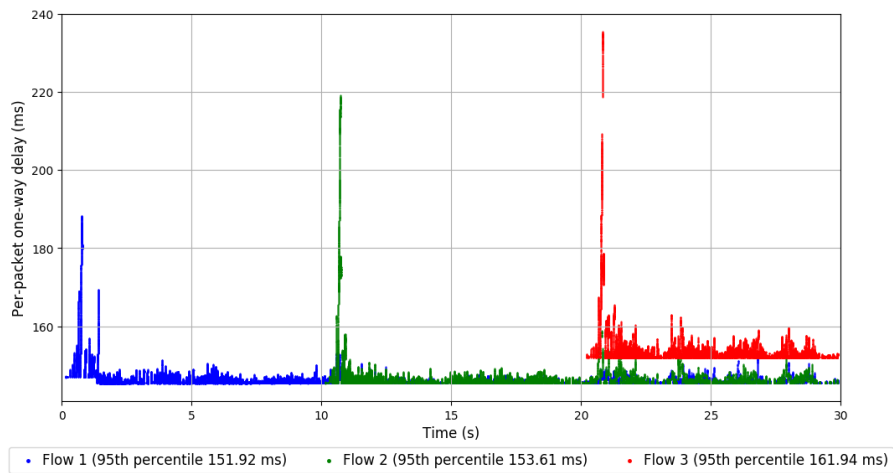
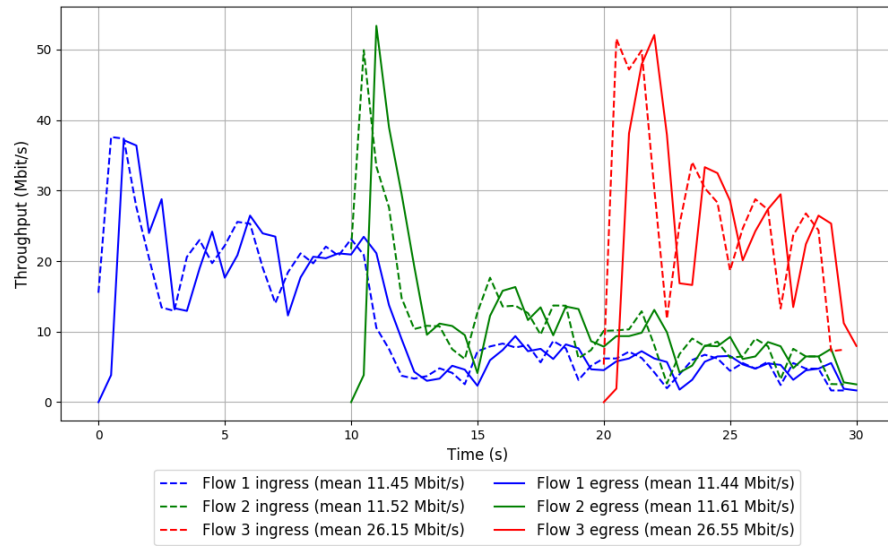


Run 5: Statistics of Indigo

Start at: 2018-12-20 09:50:59  
End at: 2018-12-20 09:51:29  
Local clock offset: -1.643 ms  
Remote clock offset: -72.963 ms

# Below is generated by plot.py at 2018-12-20 10:01:30  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 27.76 Mbit/s  
95th percentile per-packet one-way delay: 158.216 ms  
Loss rate: 0.52%  
-- Flow 1:  
Average throughput: 11.44 Mbit/s  
95th percentile per-packet one-way delay: 151.921 ms  
Loss rate: 0.82%  
-- Flow 2:  
Average throughput: 11.61 Mbit/s  
95th percentile per-packet one-way delay: 153.612 ms  
Loss rate: 0.19%  
-- Flow 3:  
Average throughput: 26.55 Mbit/s  
95th percentile per-packet one-way delay: 161.939 ms  
Loss rate: 0.42%

## Run 5: Report of Indigo — Data Link

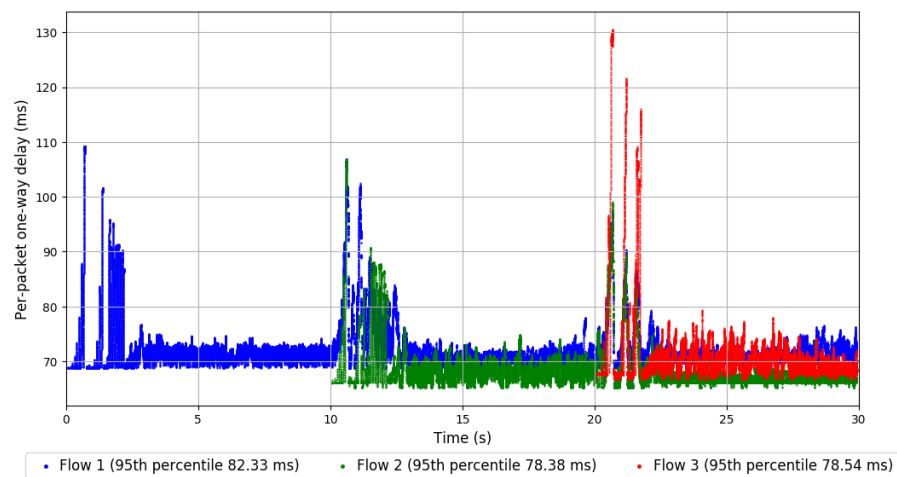
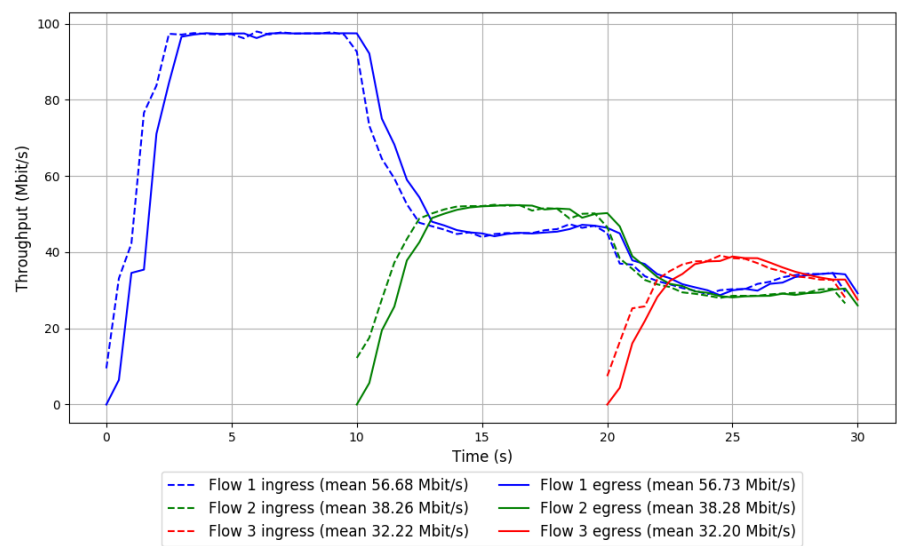


Run 1: Statistics of Indigo-MusesD

Start at: 2018-12-20 07:59:06  
End at: 2018-12-20 07:59:36  
Local clock offset: -1.23 ms  
Remote clock offset: -0.507 ms

# Below is generated by plot.py at 2018-12-20 10:01:56  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 92.79 Mbit/s  
95th percentile per-packet one-way delay: 81.330 ms  
Loss rate: 0.28%  
-- Flow 1:  
Average throughput: 56.73 Mbit/s  
95th percentile per-packet one-way delay: 82.326 ms  
Loss rate: 0.16%  
-- Flow 2:  
Average throughput: 38.28 Mbit/s  
95th percentile per-packet one-way delay: 78.382 ms  
Loss rate: 0.31%  
-- Flow 3:  
Average throughput: 32.20 Mbit/s  
95th percentile per-packet one-way delay: 78.544 ms  
Loss rate: 0.80%

Run 1: Report of Indigo-MusesD — Data Link

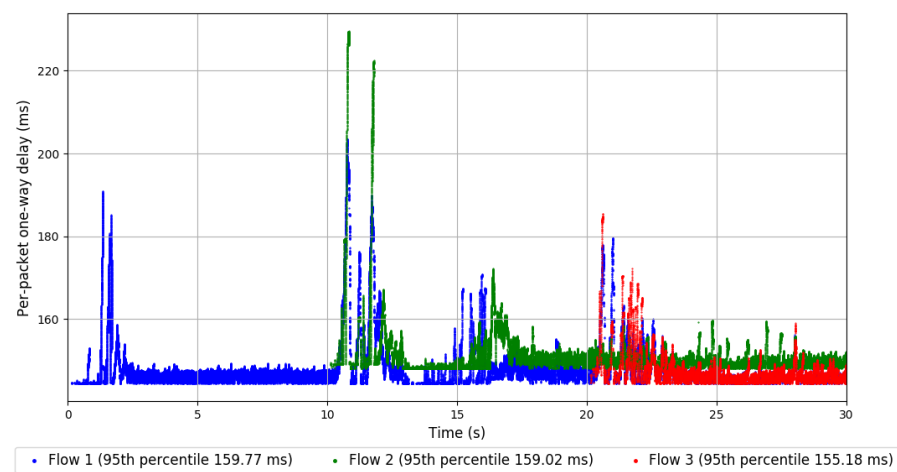
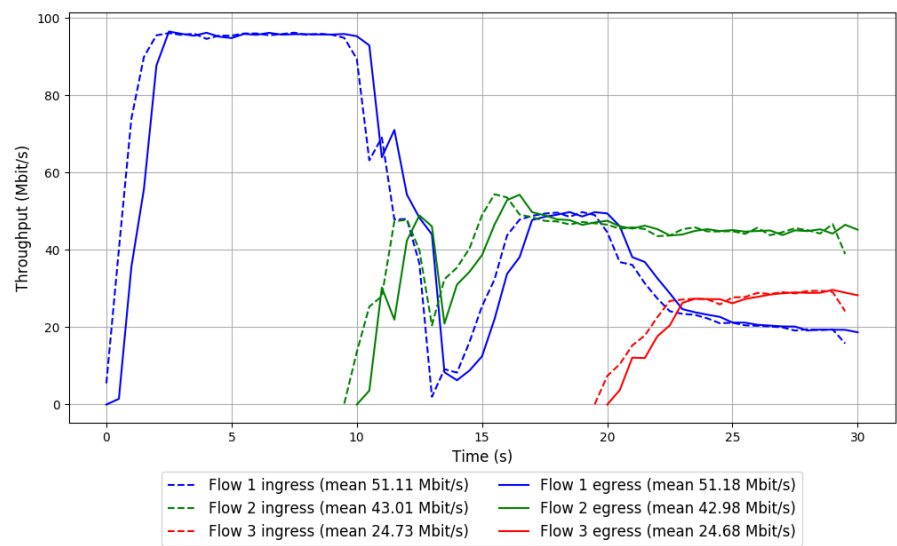


Run 2: Statistics of Indigo-MusesD

Start at: 2018-12-20 08:23:35  
End at: 2018-12-20 08:24:05  
Local clock offset: -1.017 ms  
Remote clock offset: -78.943 ms

# Below is generated by plot.py at 2018-12-20 10:01:56  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 87.93 Mbit/s  
95th percentile per-packet one-way delay: 159.036 ms  
Loss rate: 0.29%  
-- Flow 1:  
Average throughput: 51.18 Mbit/s  
95th percentile per-packet one-way delay: 159.766 ms  
Loss rate: 0.11%  
-- Flow 2:  
Average throughput: 42.98 Mbit/s  
95th percentile per-packet one-way delay: 159.017 ms  
Loss rate: 0.45%  
-- Flow 3:  
Average throughput: 24.68 Mbit/s  
95th percentile per-packet one-way delay: 155.176 ms  
Loss rate: 0.92%

Run 2: Report of Indigo-MusesD — Data Link



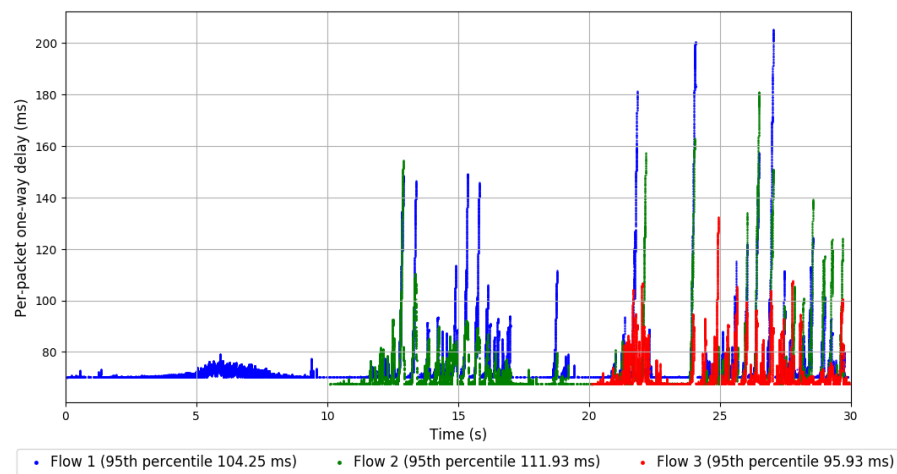
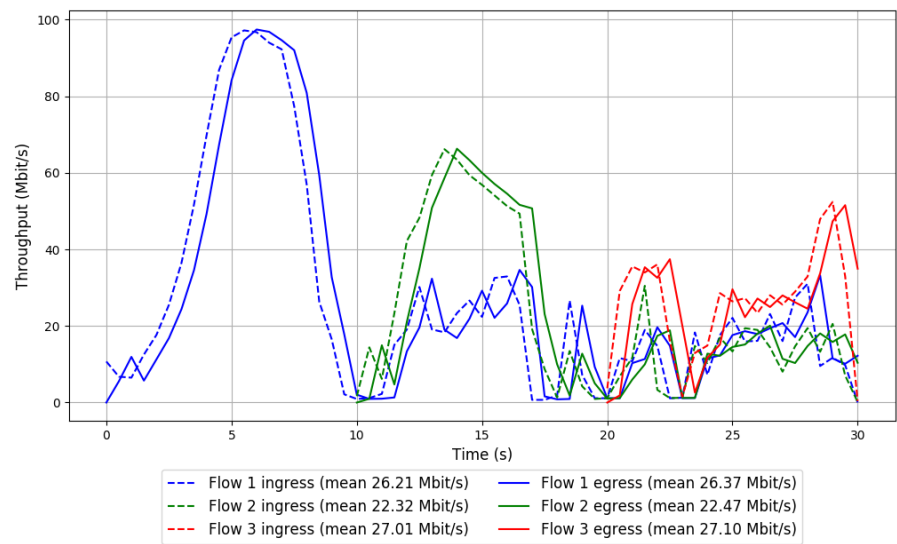


Run 3: Statistics of Indigo-MusesD

Start at: 2018-12-20 08:47:48  
End at: 2018-12-20 08:48:18  
Local clock offset: 0.095 ms  
Remote clock offset: -2.707 ms

# Below is generated by plot.py at 2018-12-20 10:01:56  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 50.17 Mbit/s  
95th percentile per-packet one-way delay: 103.675 ms  
Loss rate: 0.23%  
-- Flow 1:  
Average throughput: 26.37 Mbit/s  
95th percentile per-packet one-way delay: 104.245 ms  
Loss rate: 0.02%  
-- Flow 2:  
Average throughput: 22.47 Mbit/s  
95th percentile per-packet one-way delay: 111.931 ms  
Loss rate: 0.05%  
-- Flow 3:  
Average throughput: 27.10 Mbit/s  
95th percentile per-packet one-way delay: 95.930 ms  
Loss rate: 1.12%

Run 3: Report of Indigo-MusesD — Data Link

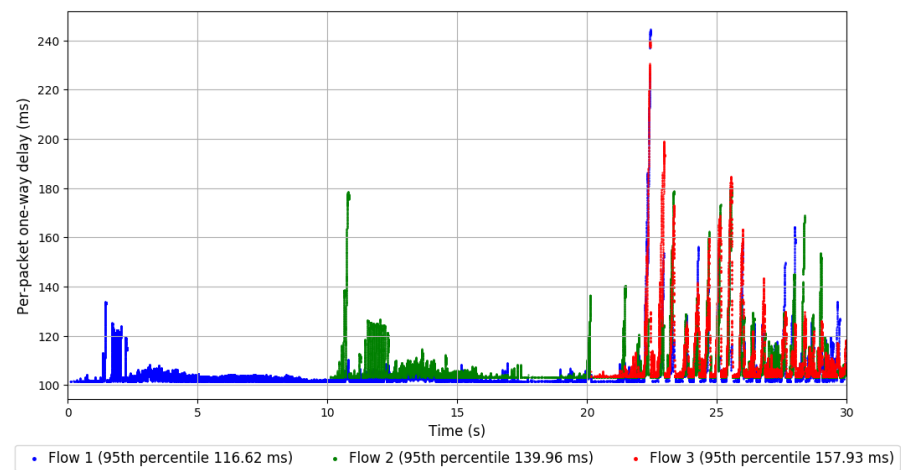
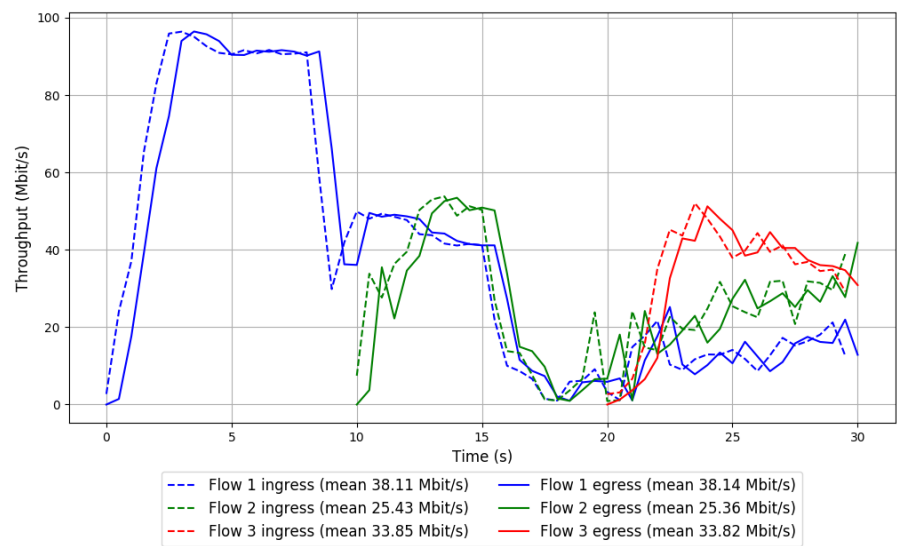


Run 4: Statistics of Indigo-MusesD

Start at: 2018-12-20 09:13:29  
End at: 2018-12-20 09:13:59  
Local clock offset: -1.923 ms  
Remote clock offset: -34.623 ms

# Below is generated by plot.py at 2018-12-20 10:01:56  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 66.12 Mbit/s  
95th percentile per-packet one-way delay: 129.986 ms  
Loss rate: 0.39%  
-- Flow 1:  
Average throughput: 38.14 Mbit/s  
95th percentile per-packet one-way delay: 116.623 ms  
Loss rate: 0.19%  
-- Flow 2:  
Average throughput: 25.36 Mbit/s  
95th percentile per-packet one-way delay: 139.960 ms  
Loss rate: 0.49%  
-- Flow 3:  
Average throughput: 33.82 Mbit/s  
95th percentile per-packet one-way delay: 157.931 ms  
Loss rate: 0.90%

Run 4: Report of Indigo-MusesD — Data Link

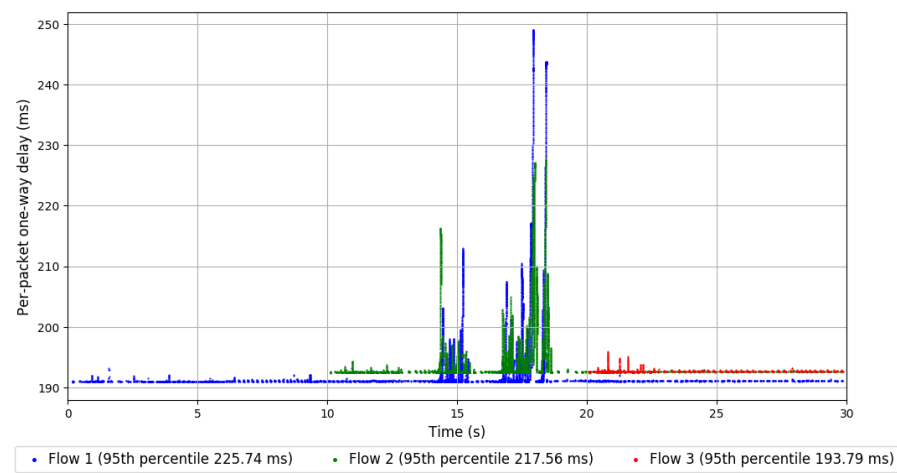
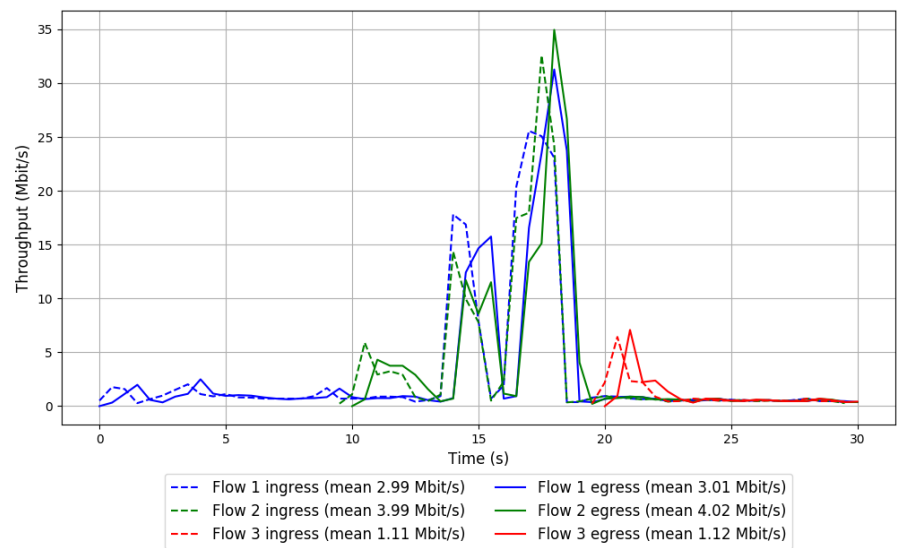


Run 5: Statistics of Indigo-MusesD

Start at: 2018-12-20 09:38:21  
End at: 2018-12-20 09:38:51  
Local clock offset: -1.874 ms  
Remote clock offset: -120.402 ms

# Below is generated by plot.py at 2018-12-20 10:01:56  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 6.05 Mbit/s  
95th percentile per-packet one-way delay: 218.083 ms  
Loss rate: 0.17%  
-- Flow 1:  
Average throughput: 3.01 Mbit/s  
95th percentile per-packet one-way delay: 225.735 ms  
Loss rate: 0.13%  
-- Flow 2:  
Average throughput: 4.02 Mbit/s  
95th percentile per-packet one-way delay: 217.562 ms  
Loss rate: 0.09%  
-- Flow 3:  
Average throughput: 1.12 Mbit/s  
95th percentile per-packet one-way delay: 193.795 ms  
Loss rate: 1.05%

Run 5: Report of Indigo-MusesD — Data Link

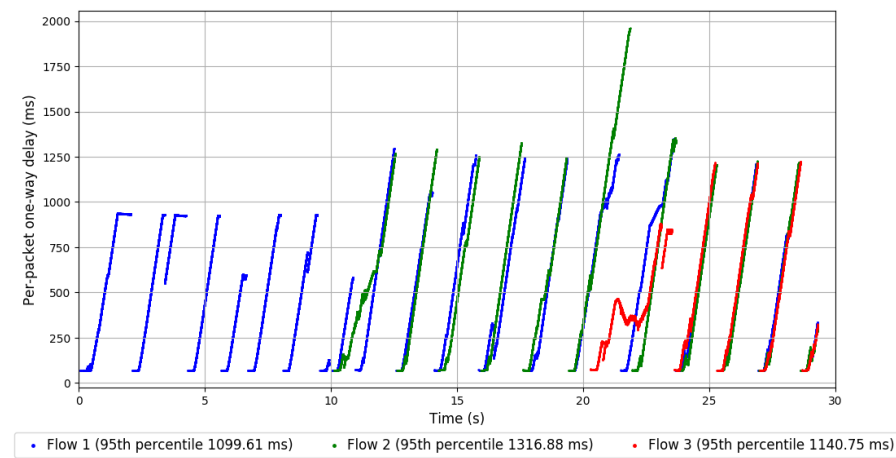
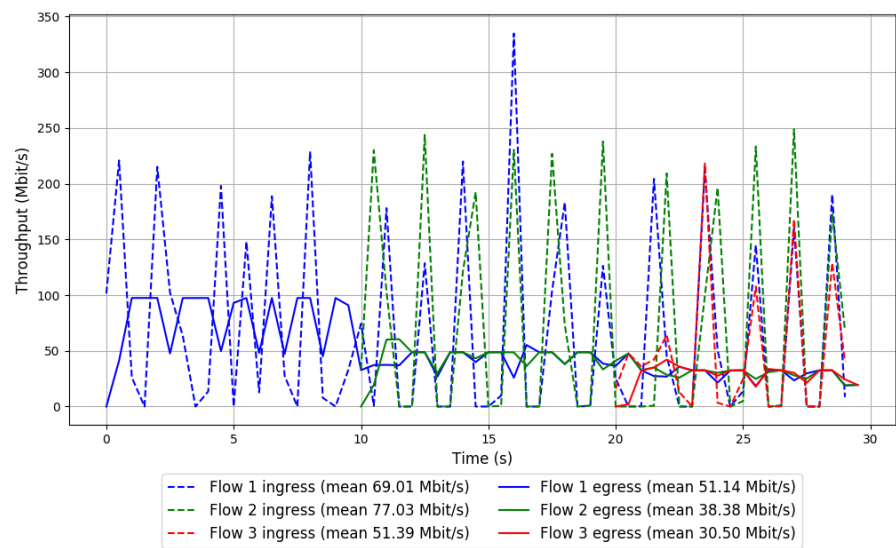


Run 1: Statistics of Indigo-MusesT

Start at: 2018-12-20 07:53:00  
End at: 2018-12-20 07:53:30  
Local clock offset: 1.317 ms  
Remote clock offset: -2.133 ms

# Below is generated by plot.py at 2018-12-20 10:02:34  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 85.72 Mbit/s  
95th percentile per-packet one-way delay: 1191.172 ms  
Loss rate: 36.12%  
-- Flow 1:  
Average throughput: 51.14 Mbit/s  
95th percentile per-packet one-way delay: 1099.605 ms  
Loss rate: 25.35%  
-- Flow 2:  
Average throughput: 38.38 Mbit/s  
95th percentile per-packet one-way delay: 1316.879 ms  
Loss rate: 49.73%  
-- Flow 3:  
Average throughput: 30.50 Mbit/s  
95th percentile per-packet one-way delay: 1140.748 ms  
Loss rate: 39.68%

Run 1: Report of Indigo-MusesT — Data Link



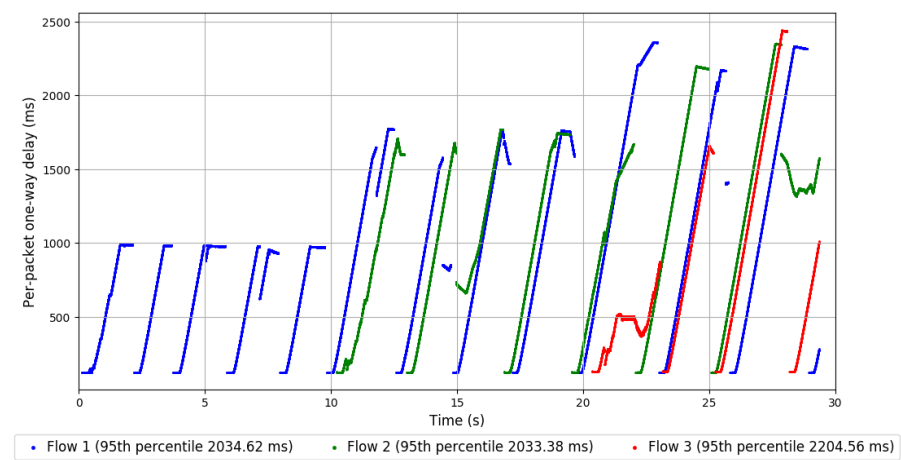
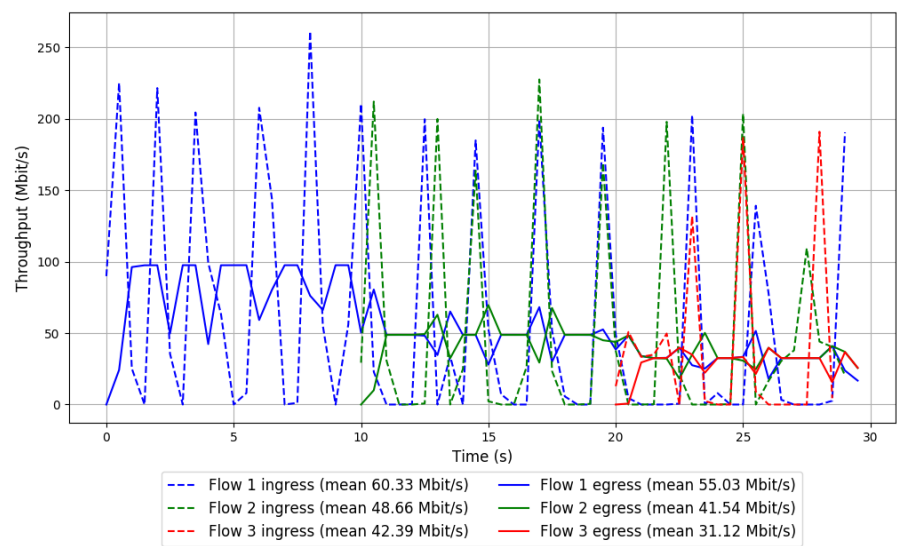


Run 2: Statistics of Indigo-MusesT

Start at: 2018-12-20 08:17:17  
End at: 2018-12-20 08:17:47  
Local clock offset: -1.286 ms  
Remote clock offset: -59.63 ms

# Below is generated by plot.py at 2018-12-20 10:02:34  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 91.79 Mbit/s  
95th percentile per-packet one-way delay: 2055.755 ms  
Loss rate: 12.20%  
-- Flow 1:  
Average throughput: 55.03 Mbit/s  
95th percentile per-packet one-way delay: 2034.617 ms  
Loss rate: 9.03%  
-- Flow 2:  
Average throughput: 41.54 Mbit/s  
95th percentile per-packet one-way delay: 2033.377 ms  
Loss rate: 14.95%  
-- Flow 3:  
Average throughput: 31.12 Mbit/s  
95th percentile per-packet one-way delay: 2204.557 ms  
Loss rate: 20.78%

Run 2: Report of Indigo-MusesT — Data Link

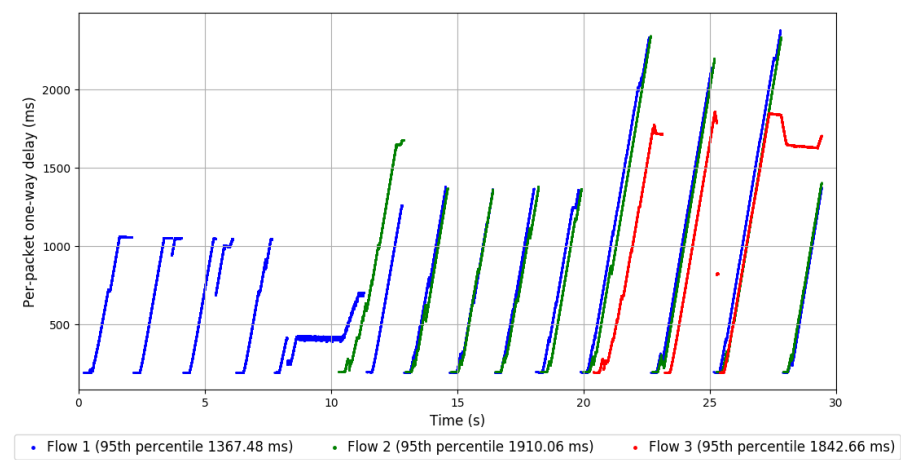
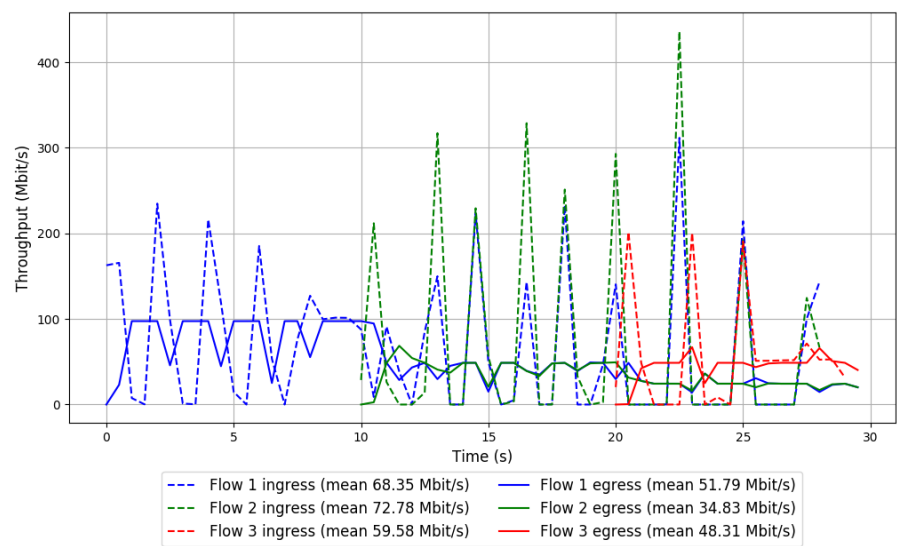


Run 3: Statistics of Indigo-MusesT

Start at: 2018-12-20 08:41:36  
End at: 2018-12-20 08:42:06  
Local clock offset: -0.082 ms  
Remote clock offset: -124.397 ms

# Below is generated by plot.py at 2018-12-20 10:02:37  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 89.49 Mbit/s  
95th percentile per-packet one-way delay: 1779.478 ms  
Loss rate: 30.59%  
-- Flow 1:  
Average throughput: 51.79 Mbit/s  
95th percentile per-packet one-way delay: 1367.484 ms  
Loss rate: 21.12%  
-- Flow 2:  
Average throughput: 34.83 Mbit/s  
95th percentile per-packet one-way delay: 1910.062 ms  
Loss rate: 49.02%  
-- Flow 3:  
Average throughput: 48.31 Mbit/s  
95th percentile per-packet one-way delay: 1842.656 ms  
Loss rate: 19.65%

Run 3: Report of Indigo-MusesT — Data Link

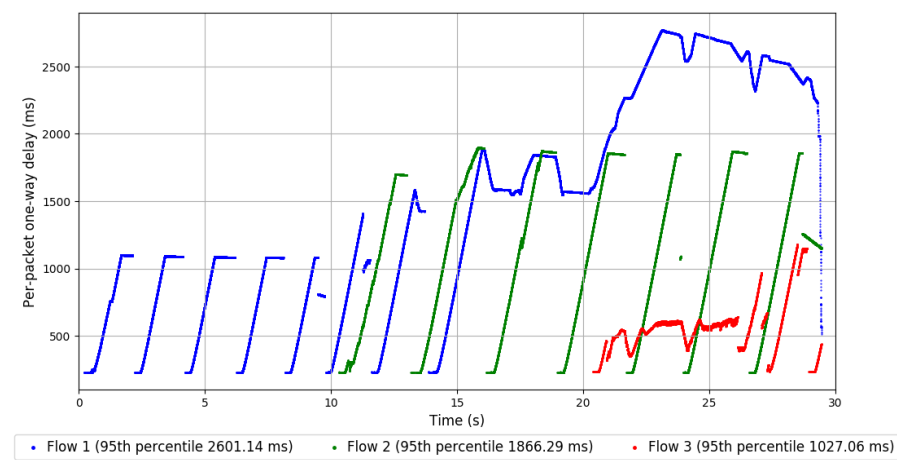
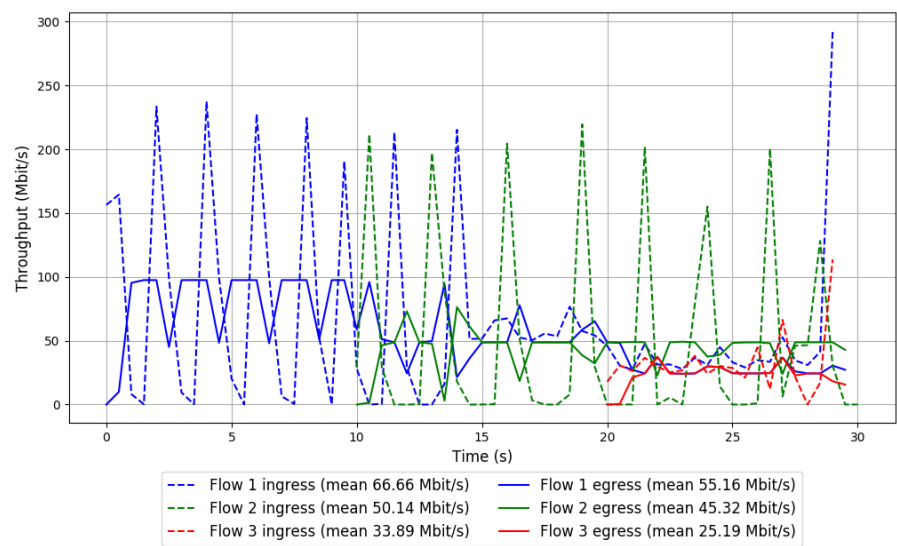


Run 4: Statistics of Indigo-MusesT

Start at: 2018-12-20 09:07:03  
End at: 2018-12-20 09:07:33  
Local clock offset: -0.232 ms  
Remote clock offset: -160.822 ms

# Below is generated by plot.py at 2018-12-20 10:02:39  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 92.63 Mbit/s  
95th percentile per-packet one-way delay: 2520.404 ms  
Loss rate: 17.01%  
-- Flow 1:  
Average throughput: 55.16 Mbit/s  
95th percentile per-packet one-way delay: 2601.145 ms  
Loss rate: 17.46%  
-- Flow 2:  
Average throughput: 45.32 Mbit/s  
95th percentile per-packet one-way delay: 1866.290 ms  
Loss rate: 13.54%  
-- Flow 3:  
Average throughput: 25.19 Mbit/s  
95th percentile per-packet one-way delay: 1027.055 ms  
Loss rate: 25.52%

Run 4: Report of Indigo-MusesT — Data Link

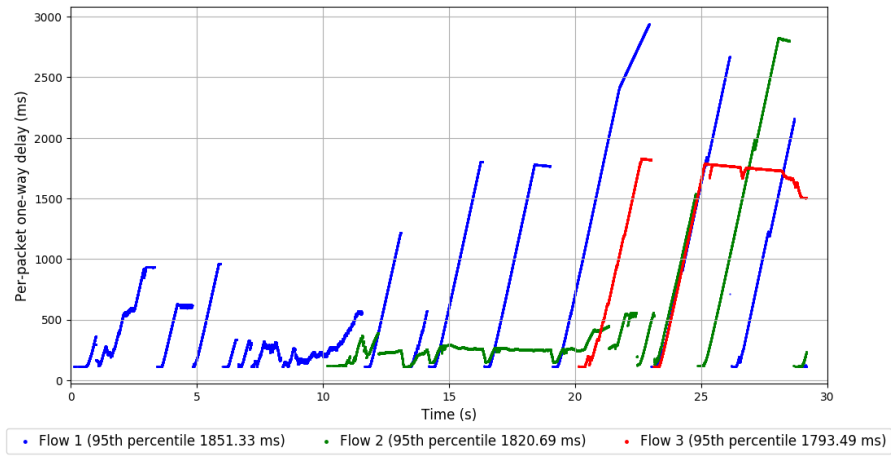
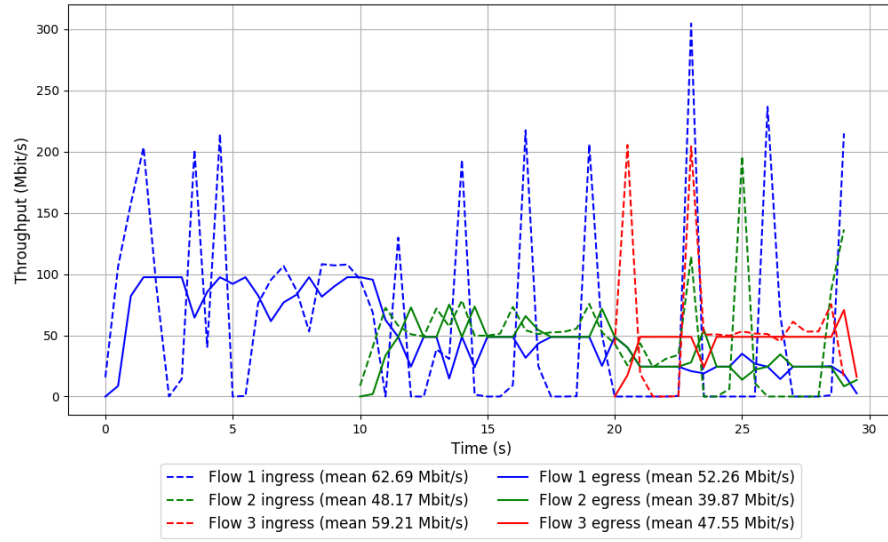


Run 5: Statistics of Indigo-MusesT

Start at: 2018-12-20 09:31:33  
End at: 2018-12-20 09:32:03  
Local clock offset: 4.169 ms  
Remote clock offset: -40.299 ms

# Below is generated by plot.py at 2018-12-20 10:02:40  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 93.13 Mbit/s  
95th percentile per-packet one-way delay: 1820.330 ms  
Loss rate: 18.17%  
-- Flow 1:  
Average throughput: 52.26 Mbit/s  
95th percentile per-packet one-way delay: 1851.333 ms  
Loss rate: 17.38%  
-- Flow 2:  
Average throughput: 39.87 Mbit/s  
95th percentile per-packet one-way delay: 1820.687 ms  
Loss rate: 18.38%  
-- Flow 3:  
Average throughput: 47.55 Mbit/s  
95th percentile per-packet one-way delay: 1793.489 ms  
Loss rate: 20.48%

## Run 5: Report of Indigo-MusesT — Data Link



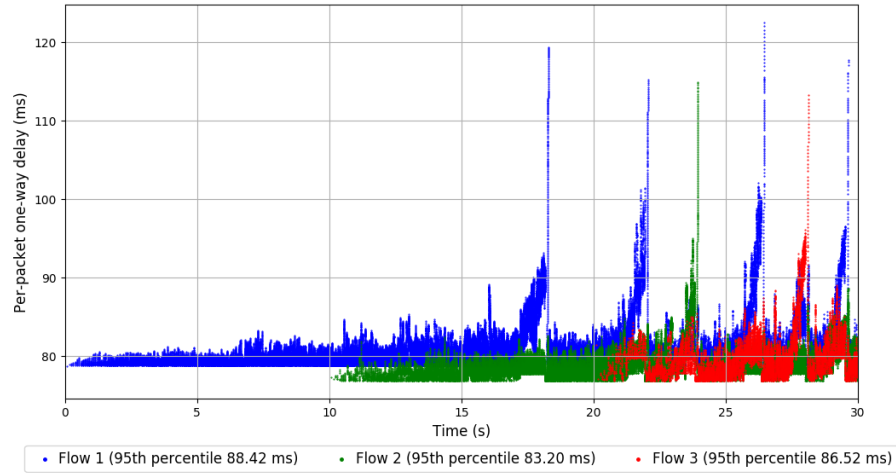
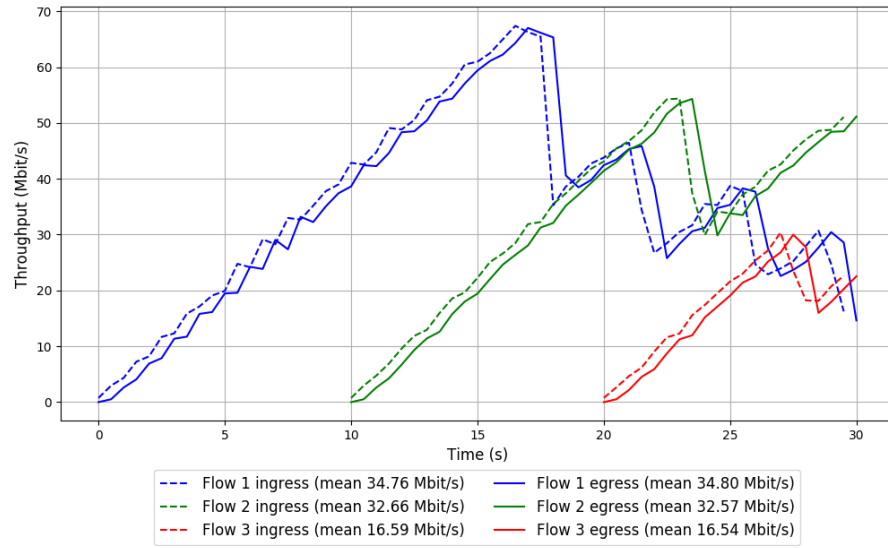


```
Run 1: Statistics of LEDBAT

Start at: 2018-12-20 07:51:47
End at: 2018-12-20 07:52:17
Local clock offset: -1.143 ms
Remote clock offset: -12.545 ms

# Below is generated by plot.py at 2018-12-20 10:02:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 61.94 Mbit/s
95th percentile per-packet one-way delay: 86.501 ms
Loss rate: 0.39%
-- Flow 1:
Average throughput: 34.80 Mbit/s
95th percentile per-packet one-way delay: 88.425 ms
Loss rate: 0.13%
-- Flow 2:
Average throughput: 32.57 Mbit/s
95th percentile per-packet one-way delay: 83.197 ms
Loss rate: 0.62%
-- Flow 3:
Average throughput: 16.54 Mbit/s
95th percentile per-packet one-way delay: 86.516 ms
Loss rate: 1.11%
```

# Run 1: Report of LEDBAT — Data Link

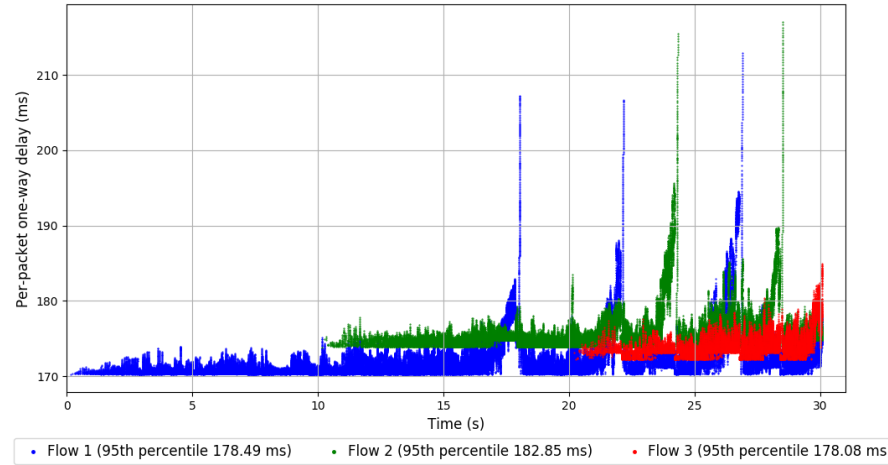
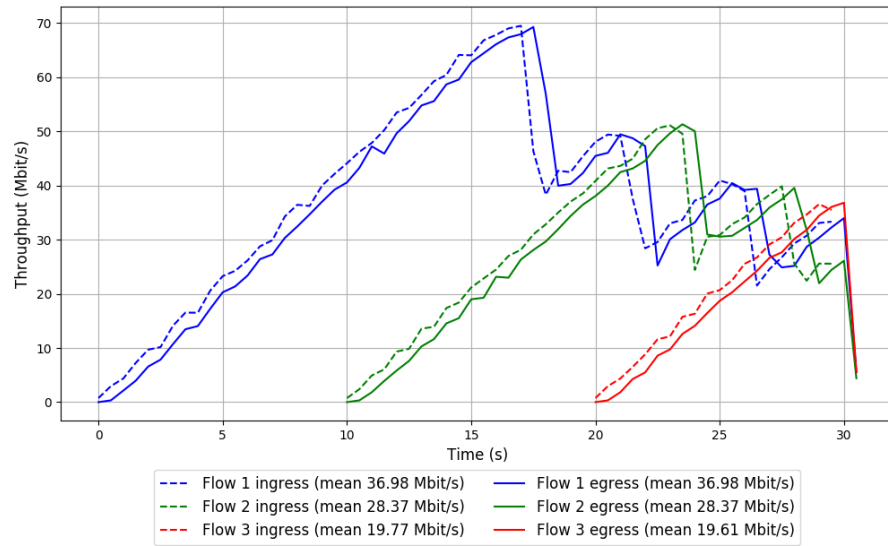


Run 2: Statistics of LEDBAT

Start at: 2018-12-20 08:16:04  
End at: 2018-12-20 08:16:34  
Local clock offset: -1.519 ms  
Remote clock offset: -105.333 ms

# Below is generated by plot.py at 2018-12-20 10:02:43  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 62.35 Mbit/s  
95th percentile per-packet one-way delay: 179.665 ms  
Loss rate: 0.43%  
-- Flow 1:  
Average throughput: 36.98 Mbit/s  
95th percentile per-packet one-way delay: 178.487 ms  
Loss rate: 0.25%  
-- Flow 2:  
Average throughput: 28.37 Mbit/s  
95th percentile per-packet one-way delay: 182.849 ms  
Loss rate: 0.39%  
-- Flow 3:  
Average throughput: 19.61 Mbit/s  
95th percentile per-packet one-way delay: 178.079 ms  
Loss rate: 1.54%

## Run 2: Report of LEDBAT — Data Link

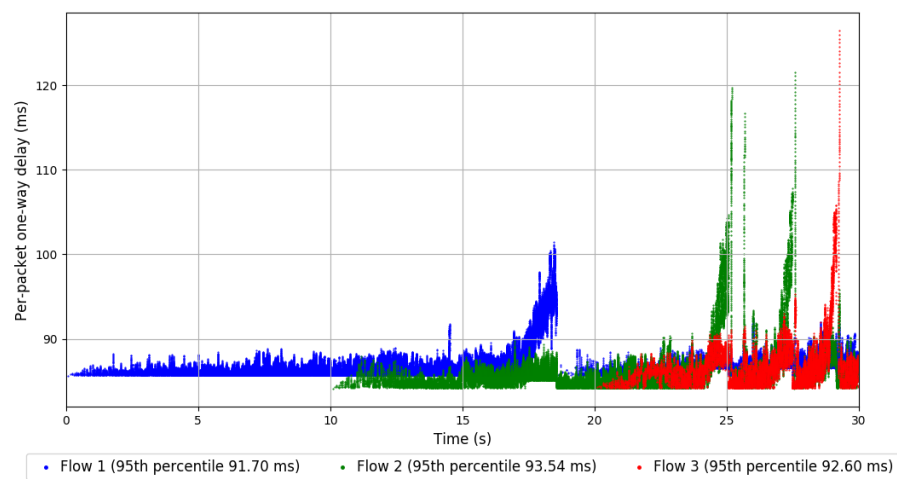
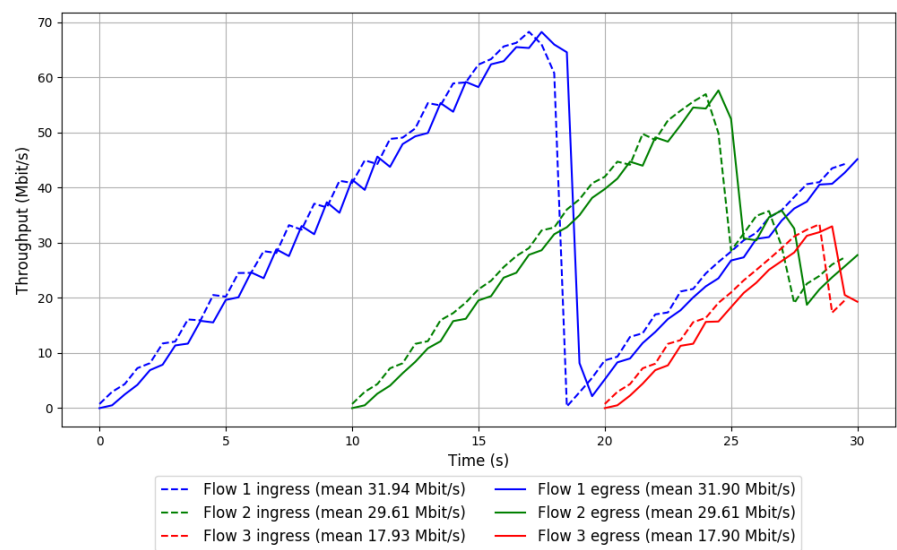


Run 3: Statistics of LEDBAT

Start at: 2018-12-20 08:40:22  
End at: 2018-12-20 08:40:52  
Local clock offset: -0.547 ms  
Remote clock offset: -17.082 ms

# Below is generated by plot.py at 2018-12-20 10:02:43  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 57.52 Mbit/s  
95th percentile per-packet one-way delay: 92.239 ms  
Loss rate: 0.45%  
-- Flow 1:  
Average throughput: 31.90 Mbit/s  
95th percentile per-packet one-way delay: 91.698 ms  
Loss rate: 0.40%  
-- Flow 2:  
Average throughput: 29.61 Mbit/s  
95th percentile per-packet one-way delay: 93.544 ms  
Loss rate: 0.38%  
-- Flow 3:  
Average throughput: 17.90 Mbit/s  
95th percentile per-packet one-way delay: 92.604 ms  
Loss rate: 0.91%

Run 3: Report of LEDBAT — Data Link

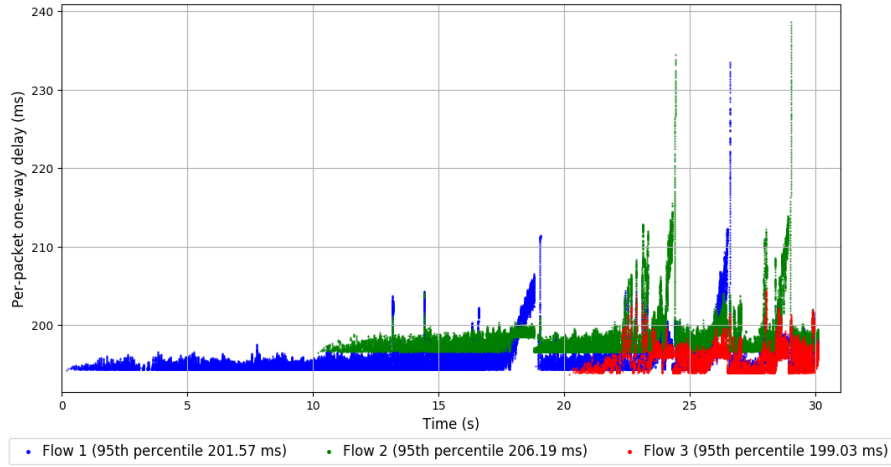
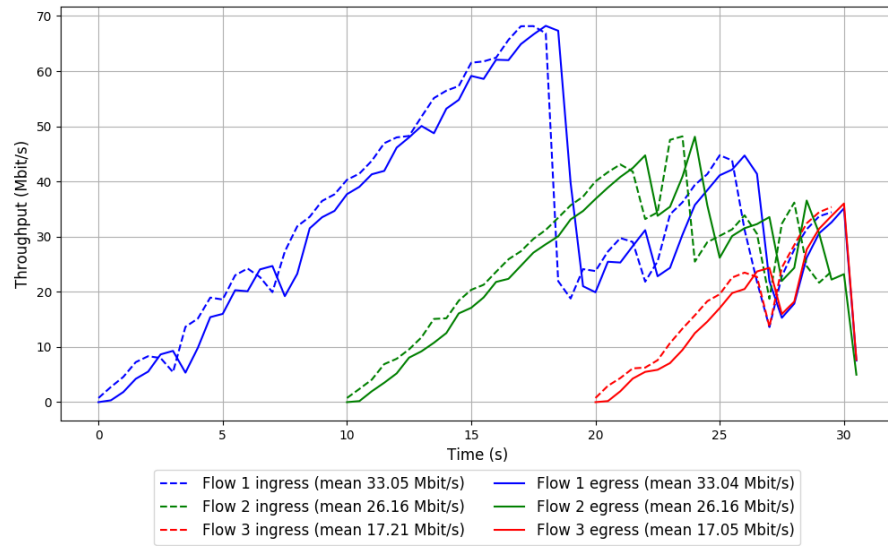


Run 4: Statistics of LEDBAT

Start at: 2018-12-20 09:05:41  
End at: 2018-12-20 09:06:11  
Local clock offset: 0.378 ms  
Remote clock offset: -126.104 ms

# Below is generated by plot.py at 2018-12-20 10:03:08  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 56.09 Mbit/s  
95th percentile per-packet one-way delay: 202.229 ms  
Loss rate: 0.46%  
-- Flow 1:  
Average throughput: 33.04 Mbit/s  
95th percentile per-packet one-way delay: 201.566 ms  
Loss rate: 0.29%  
-- Flow 2:  
Average throughput: 26.16 Mbit/s  
95th percentile per-packet one-way delay: 206.194 ms  
Loss rate: 0.38%  
-- Flow 3:  
Average throughput: 17.05 Mbit/s  
95th percentile per-packet one-way delay: 199.028 ms  
Loss rate: 1.65%

#### Run 4: Report of LEDBAT — Data Link



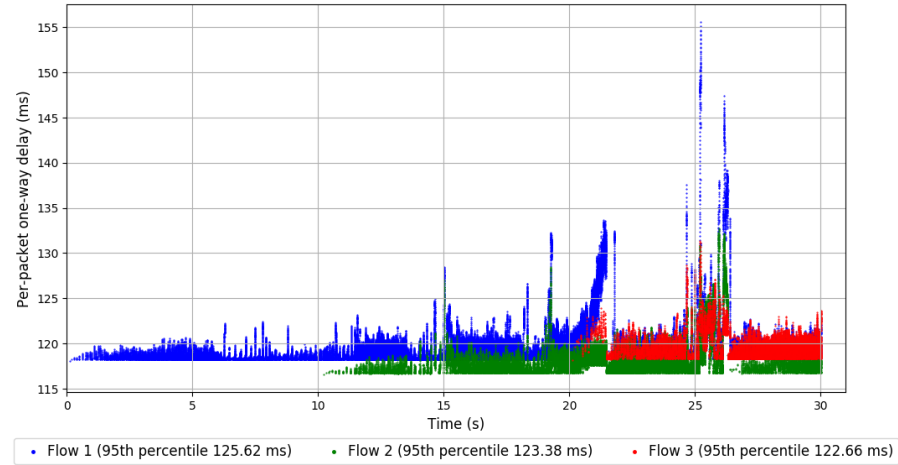
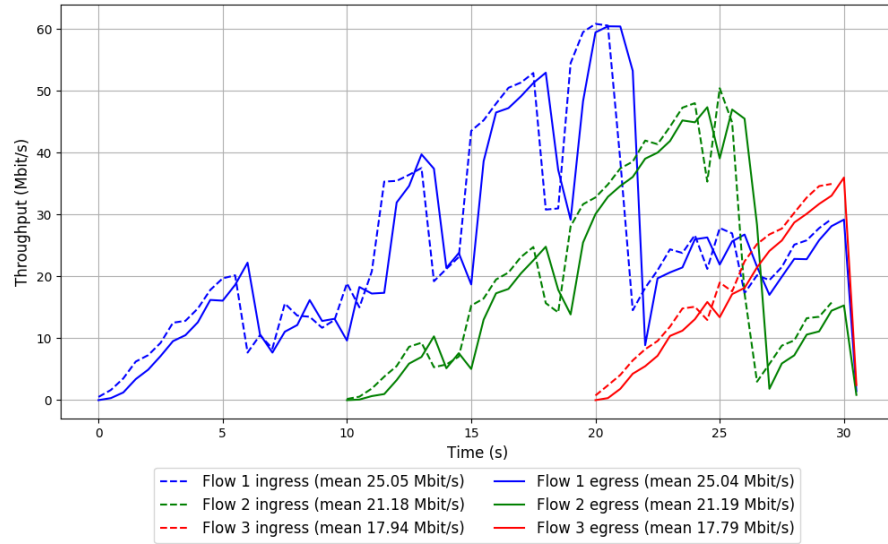


Run 5: Statistics of LEDBAT

Start at: 2018-12-20 09:30:05  
End at: 2018-12-20 09:30:35  
Local clock offset: -0.848 ms  
Remote clock offset: -47.159 ms

# Below is generated by plot.py at 2018-12-20 10:03:08  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 44.95 Mbit/s  
95th percentile per-packet one-way delay: 124.126 ms  
Loss rate: 0.51%  
-- Flow 1:  
Average throughput: 25.04 Mbit/s  
95th percentile per-packet one-way delay: 125.621 ms  
Loss rate: 0.33%  
-- Flow 2:  
Average throughput: 21.19 Mbit/s  
95th percentile per-packet one-way delay: 123.376 ms  
Loss rate: 0.35%  
-- Flow 3:  
Average throughput: 17.79 Mbit/s  
95th percentile per-packet one-way delay: 122.659 ms  
Loss rate: 1.63%

## Run 5: Report of LEDBAT — Data Link

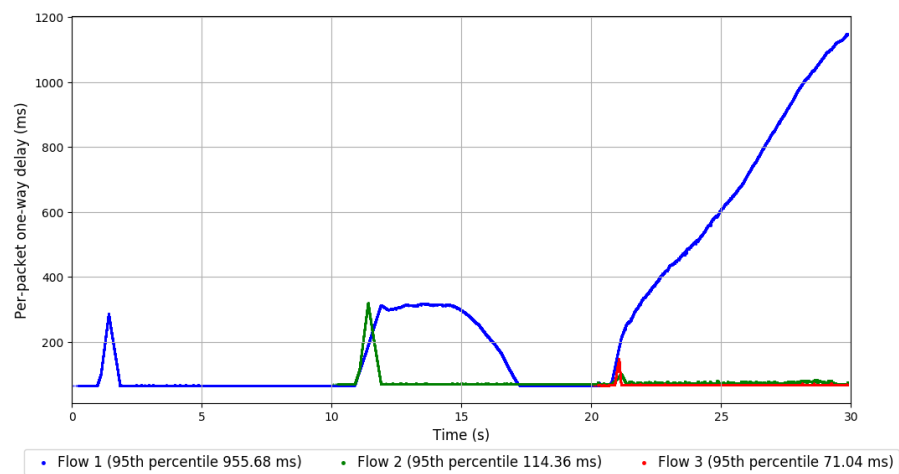
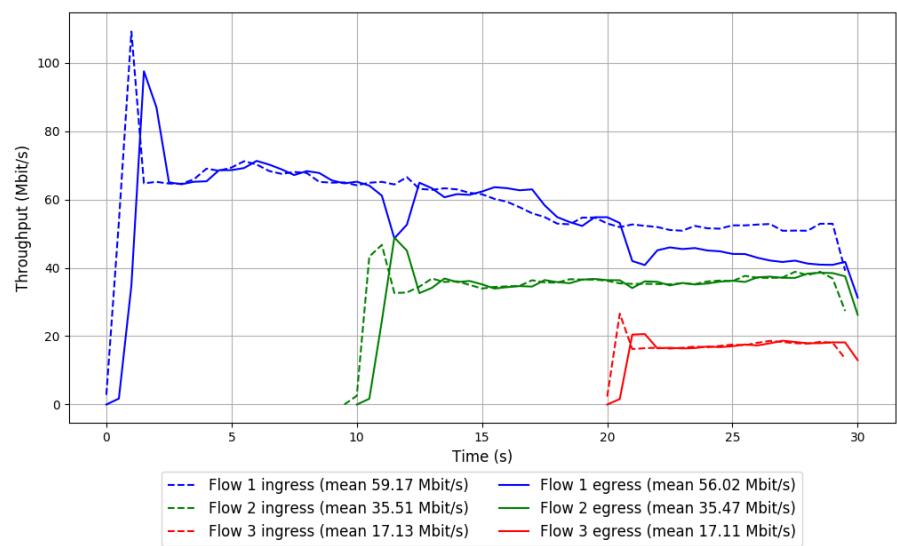


Run 1: Statistics of PCC-Allegro

Start at: 2018-12-20 07:56:37  
End at: 2018-12-20 07:57:07  
Local clock offset: -0.353 ms  
Remote clock offset: -1.189 ms

# Below is generated by plot.py at 2018-12-20 10:03:34  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 85.21 Mbit/s  
95th percentile per-packet one-way delay: 814.007 ms  
Loss rate: 3.92%  
-- Flow 1:  
Average throughput: 56.02 Mbit/s  
95th percentile per-packet one-way delay: 955.684 ms  
Loss rate: 5.57%  
-- Flow 2:  
Average throughput: 35.47 Mbit/s  
95th percentile per-packet one-way delay: 114.358 ms  
Loss rate: 0.50%  
-- Flow 3:  
Average throughput: 17.11 Mbit/s  
95th percentile per-packet one-way delay: 71.036 ms  
Loss rate: 0.93%

Run 1: Report of PCC-Allegro — Data Link

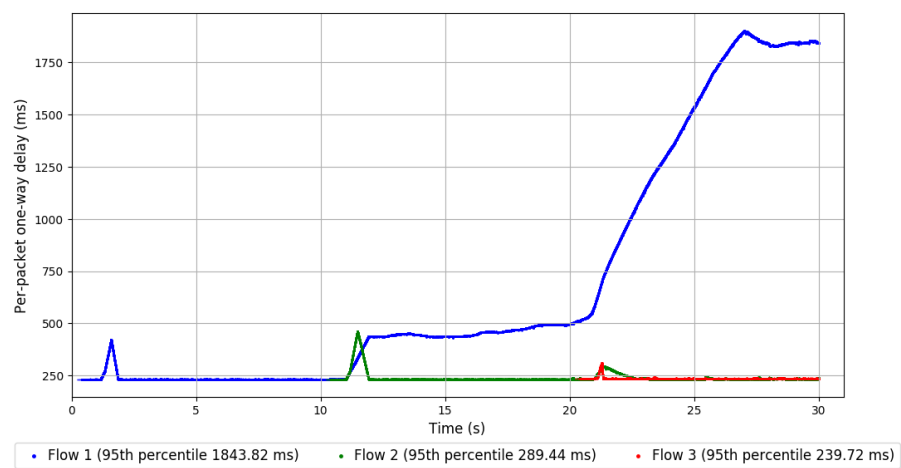
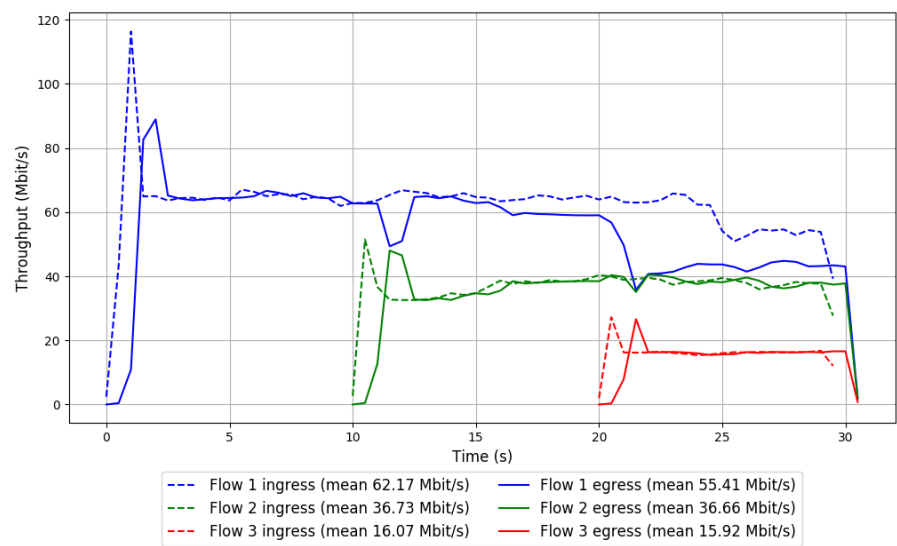


Run 2: Statistics of PCC-Allegro

Start at: 2018-12-20 08:20:54  
End at: 2018-12-20 08:21:24  
Local clock offset: 1.257 ms  
Remote clock offset: -164.223 ms

# Below is generated by plot.py at 2018-12-20 10:03:36  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 84.99 Mbit/s  
95th percentile per-packet one-way delay: 1834.528 ms  
Loss rate: 7.74%  
-- Flow 1:  
Average throughput: 55.41 Mbit/s  
95th percentile per-packet one-way delay: 1843.819 ms  
Loss rate: 11.07%  
-- Flow 2:  
Average throughput: 36.66 Mbit/s  
95th percentile per-packet one-way delay: 289.441 ms  
Loss rate: 0.55%  
-- Flow 3:  
Average throughput: 15.92 Mbit/s  
95th percentile per-packet one-way delay: 239.722 ms  
Loss rate: 1.71%

Run 2: Report of PCC-Allegro — Data Link

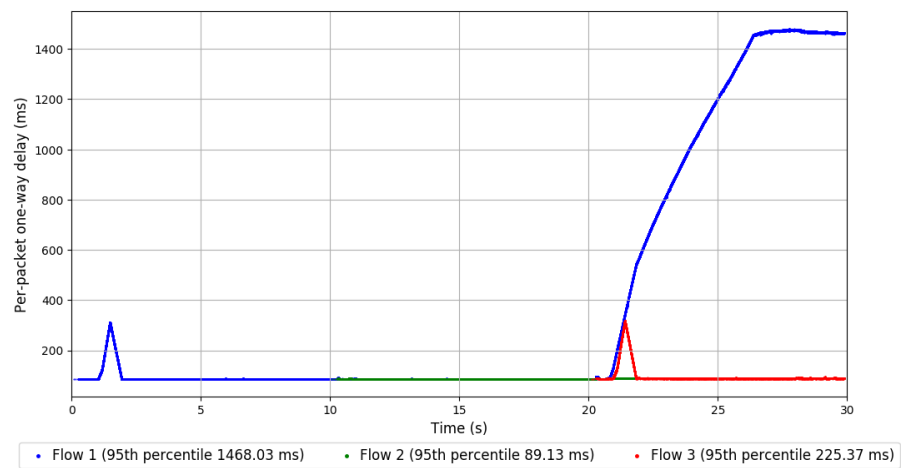
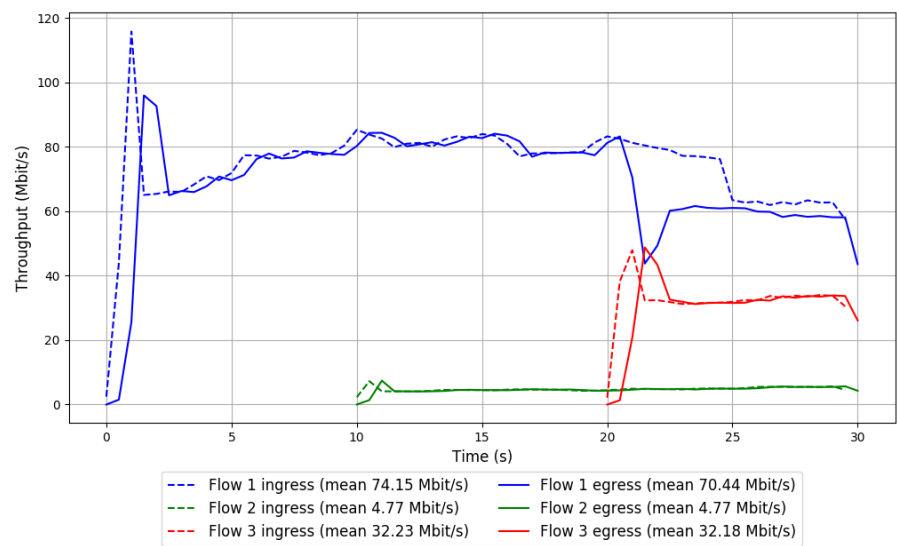


Run 3: Statistics of PCC-Allegro

Start at: 2018-12-20 08:45:14  
End at: 2018-12-20 08:45:44  
Local clock offset: -0.726 ms  
Remote clock offset: -19.797 ms

# Below is generated by plot.py at 2018-12-20 10:03:37  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 84.16 Mbit/s  
95th percentile per-packet one-way delay: 1466.864 ms  
Loss rate: 4.86%  
-- Flow 1:  
Average throughput: 70.44 Mbit/s  
95th percentile per-packet one-way delay: 1468.033 ms  
Loss rate: 5.49%  
-- Flow 2:  
Average throughput: 4.77 Mbit/s  
95th percentile per-packet one-way delay: 89.127 ms  
Loss rate: 0.68%  
-- Flow 3:  
Average throughput: 32.18 Mbit/s  
95th percentile per-packet one-way delay: 225.367 ms  
Loss rate: 1.73%

Run 3: Report of PCC-Allegro — Data Link



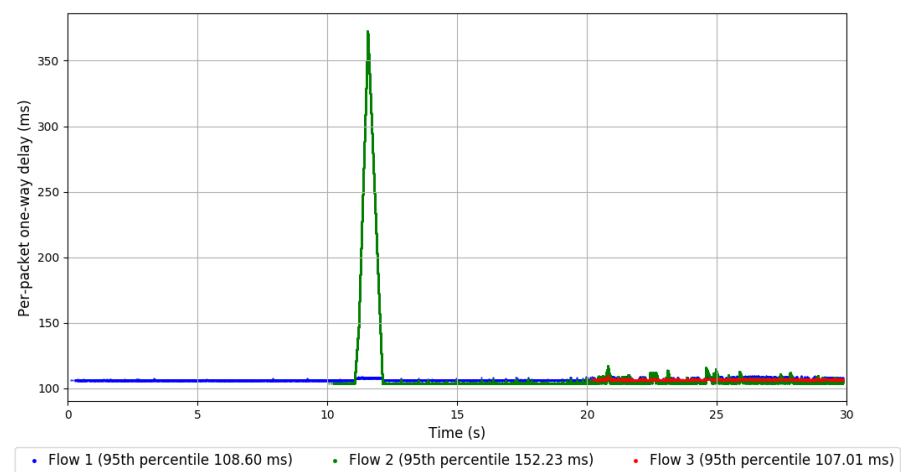
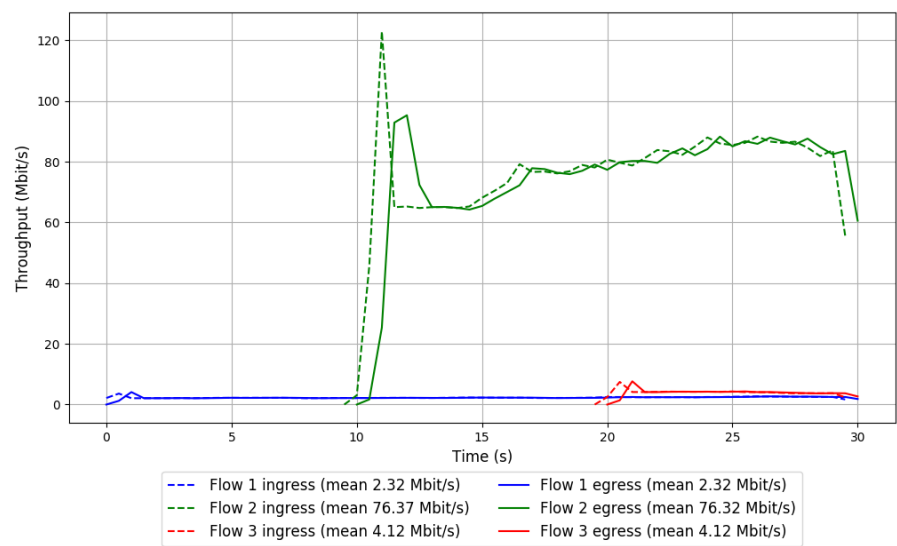


Run 4: Statistics of PCC-Allegro

Start at: 2018-12-20 09:10:50  
End at: 2018-12-20 09:11:20  
Local clock offset: -1.33 ms  
Remote clock offset: -36.963 ms

# Below is generated by plot.py at 2018-12-20 10:03:37  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 54.43 Mbit/s  
95th percentile per-packet one-way delay: 137.379 ms  
Loss rate: 0.43%  
-- Flow 1:  
Average throughput: 2.32 Mbit/s  
95th percentile per-packet one-way delay: 108.604 ms  
Loss rate: 0.28%  
-- Flow 2:  
Average throughput: 76.32 Mbit/s  
95th percentile per-packet one-way delay: 152.230 ms  
Loss rate: 0.43%  
-- Flow 3:  
Average throughput: 4.12 Mbit/s  
95th percentile per-packet one-way delay: 107.012 ms  
Loss rate: 0.68%

Run 4: Report of PCC-Allegro — Data Link



Run 5: Statistics of PCC-Allegro

Start at: 2018-12-20 09:35:39

End at: 2018-12-20 09:36:09

Local clock offset: 1.236 ms

Remote clock offset: -49.262 ms

# Below is generated by plot.py at 2018-12-20 10:03:37

# Datalink statistics

-- Total of 3 flows:

Average throughput: 65.33 Mbit/s

95th percentile per-packet one-way delay: 846.305 ms

Loss rate: 1.48%

-- Flow 1:

Average throughput: 16.06 Mbit/s

95th percentile per-packet one-way delay: 123.223 ms

Loss rate: 0.46%

-- Flow 2:

Average throughput: 66.28 Mbit/s

95th percentile per-packet one-way delay: 932.645 ms

Loss rate: 1.86%

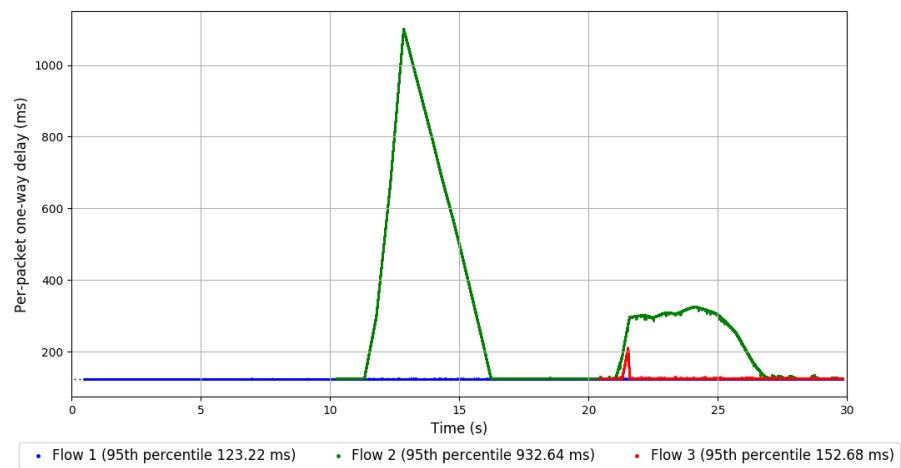
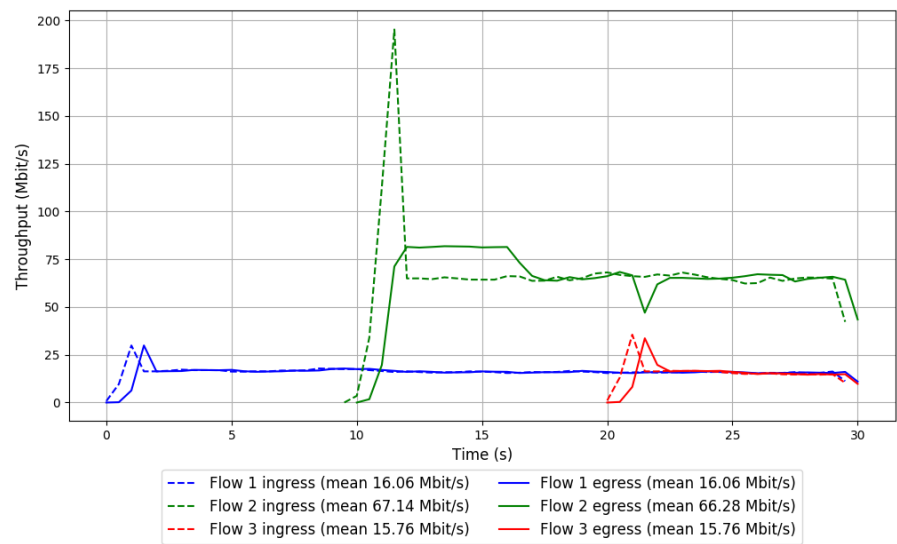
-- Flow 3:

Average throughput: 15.76 Mbit/s

95th percentile per-packet one-way delay: 152.684 ms

Loss rate: 1.37%

Run 5: Report of PCC-Allegro — Data Link

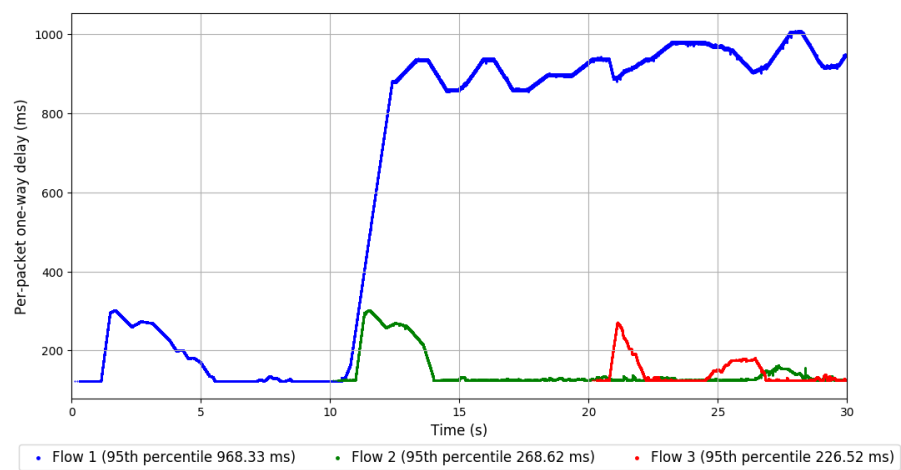
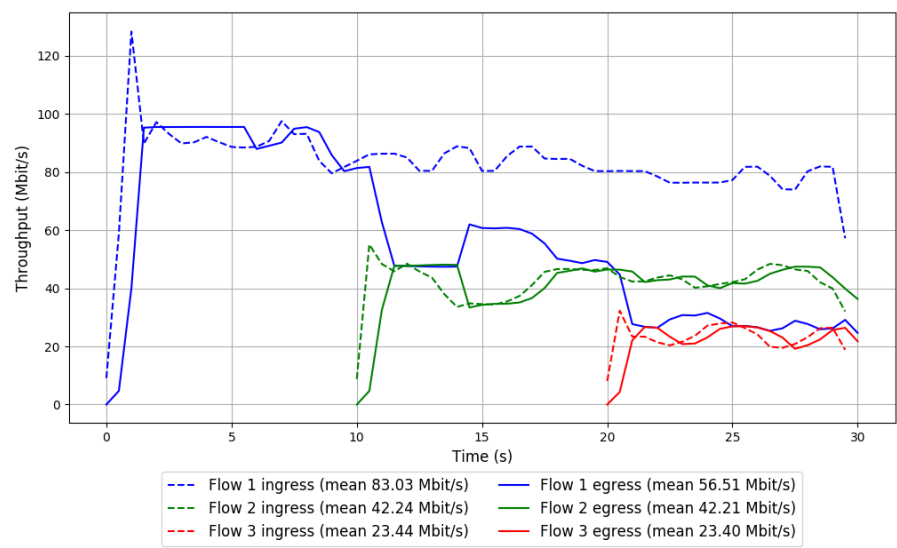


```
Run 1: Statistics of PCC-Expr

Start at: 2018-12-20 08:00:20
End at: 2018-12-20 08:00:50
Local clock offset: 1.373 ms
Remote clock offset: -54.025 ms

# Below is generated by plot.py at 2018-12-20 10:04:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.24 Mbit/s
95th percentile per-packet one-way delay: 938.987 ms
Loss rate: 22.62%
-- Flow 1:
Average throughput: 56.51 Mbit/s
95th percentile per-packet one-way delay: 968.331 ms
Loss rate: 32.14%
-- Flow 2:
Average throughput: 42.21 Mbit/s
95th percentile per-packet one-way delay: 268.616 ms
Loss rate: 0.46%
-- Flow 3:
Average throughput: 23.40 Mbit/s
95th percentile per-packet one-way delay: 226.523 ms
Loss rate: 0.95%
```

Run 1: Report of PCC-Expr — Data Link

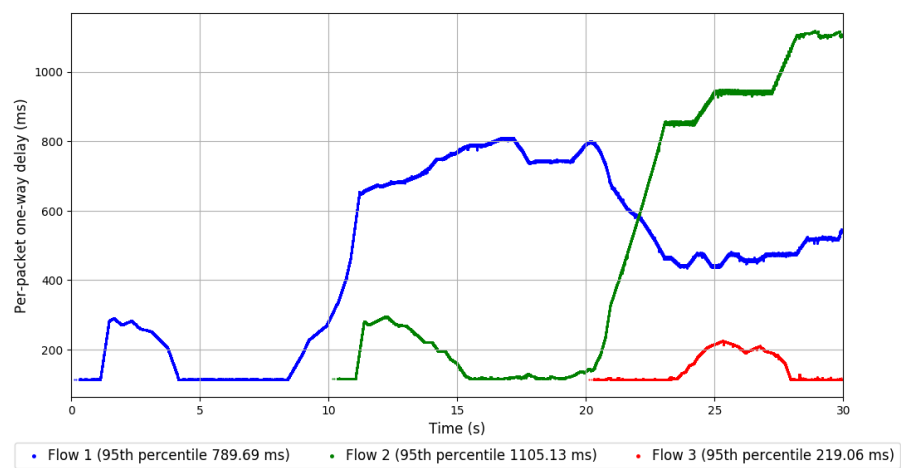
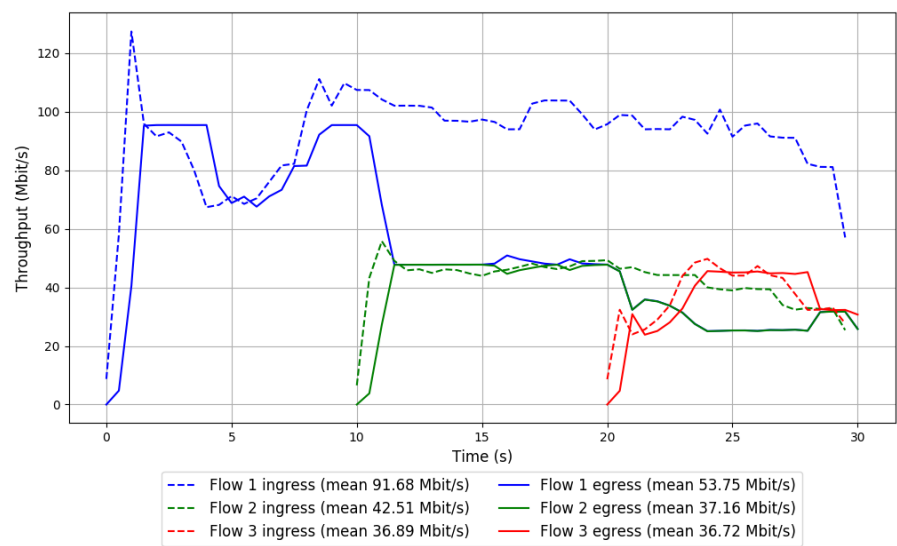


Run 2: Statistics of PCC-Expr

Start at: 2018-12-20 08:24:57  
End at: 2018-12-20 08:25:27  
Local clock offset: -1.439 ms  
Remote clock offset: -47.745 ms

# Below is generated by plot.py at 2018-12-20 10:05:18  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 90.49 Mbit/s  
95th percentile per-packet one-way delay: 921.933 ms  
Loss rate: 31.69%  
-- Flow 1:  
Average throughput: 53.75 Mbit/s  
95th percentile per-packet one-way delay: 789.686 ms  
Loss rate: 41.54%  
-- Flow 2:  
Average throughput: 37.16 Mbit/s  
95th percentile per-packet one-way delay: 1105.126 ms  
Loss rate: 12.91%  
-- Flow 3:  
Average throughput: 36.72 Mbit/s  
95th percentile per-packet one-way delay: 219.063 ms  
Loss rate: 1.14%

Run 2: Report of PCC-Expr — Data Link



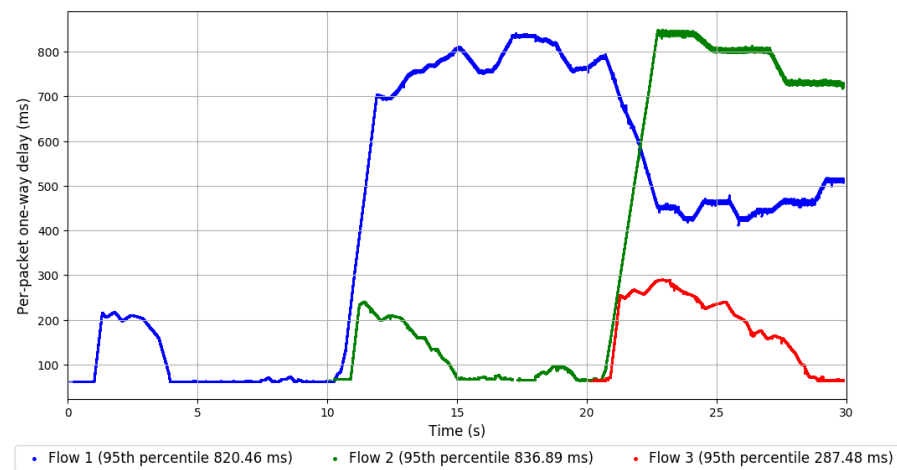
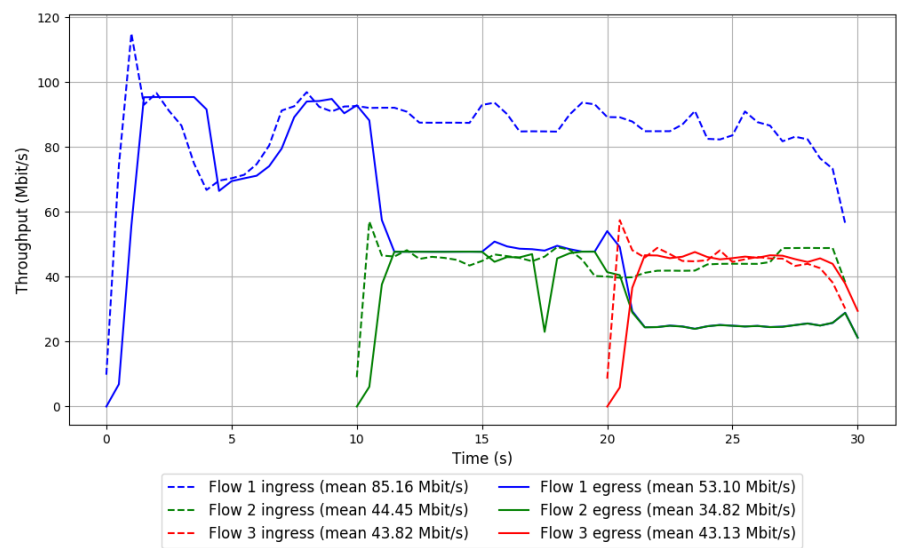


Run 3: Statistics of PCC-Expr

Start at: 2018-12-20 08:49:01  
End at: 2018-12-20 08:49:31  
Local clock offset: -2.193 ms  
Remote clock offset: -1.055 ms

# Below is generated by plot.py at 2018-12-20 10:05:22  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 90.40 Mbit/s  
95th percentile per-packet one-way delay: 816.966 ms  
Loss rate: 30.20%  
-- Flow 1:  
Average throughput: 53.10 Mbit/s  
95th percentile per-packet one-way delay: 820.463 ms  
Loss rate: 37.80%  
-- Flow 2:  
Average throughput: 34.82 Mbit/s  
95th percentile per-packet one-way delay: 836.895 ms  
Loss rate: 21.96%  
-- Flow 3:  
Average throughput: 43.13 Mbit/s  
95th percentile per-packet one-way delay: 287.478 ms  
Loss rate: 2.31%

Run 3: Report of PCC-Expr — Data Link

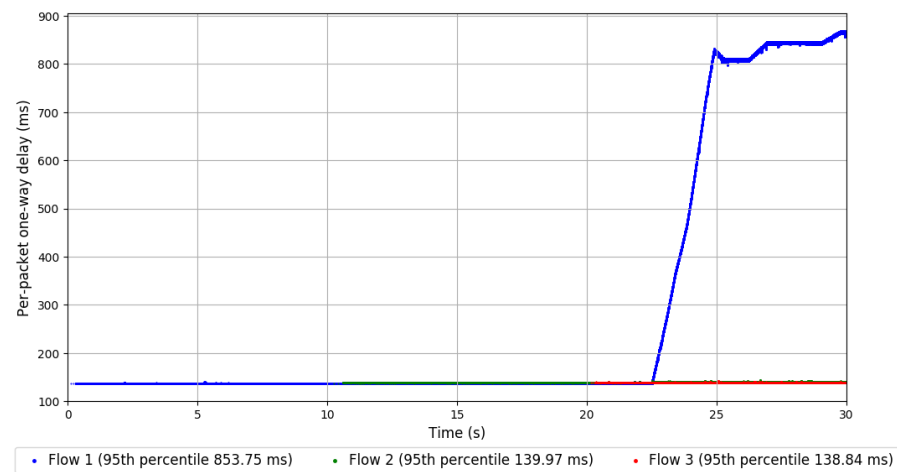
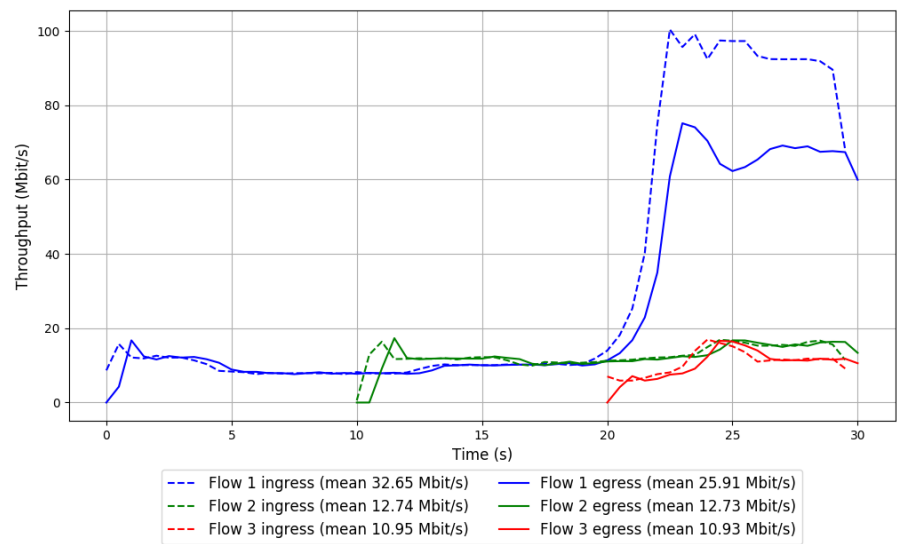


Run 4: Statistics of PCC-Expr

Start at: 2018-12-20 09:14:44  
End at: 2018-12-20 09:15:14  
Local clock offset: -1.817 ms  
Remote clock offset: -69.119 ms

# Below is generated by plot.py at 2018-12-20 10:05:22  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 37.92 Mbit/s  
95th percentile per-packet one-way delay: 846.243 ms  
Loss rate: 15.38%  
-- Flow 1:  
Average throughput: 25.91 Mbit/s  
95th percentile per-packet one-way delay: 853.753 ms  
Loss rate: 20.84%  
-- Flow 2:  
Average throughput: 12.73 Mbit/s  
95th percentile per-packet one-way delay: 139.965 ms  
Loss rate: 0.45%  
-- Flow 3:  
Average throughput: 10.93 Mbit/s  
95th percentile per-packet one-way delay: 138.845 ms  
Loss rate: 0.92%

Run 4: Report of PCC-Expr — Data Link

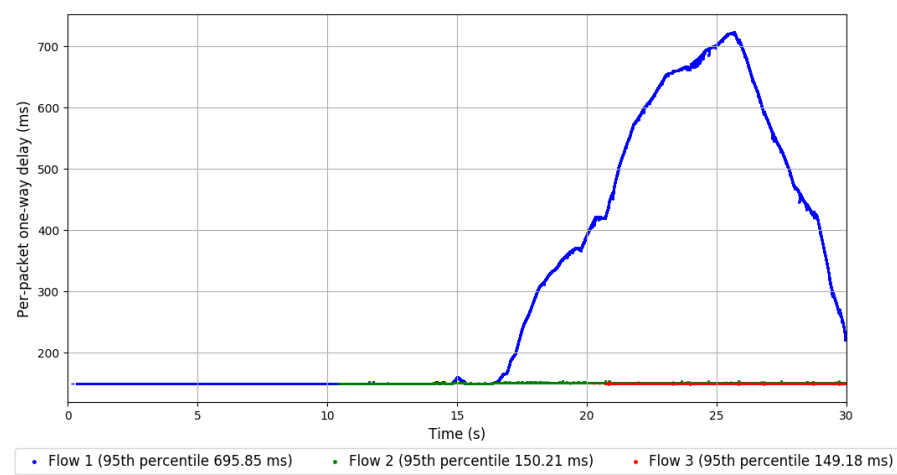
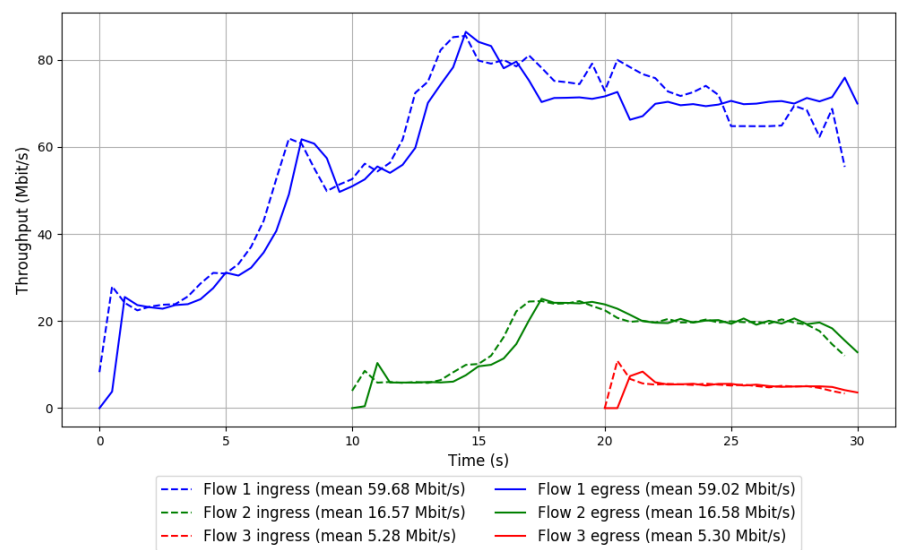


Run 5: Statistics of PCC-Expr

Start at: 2018-12-20 09:39:36  
End at: 2018-12-20 09:40:06  
Local clock offset: -0.228 ms  
Remote clock offset: -75.644 ms

# Below is generated by plot.py at 2018-12-20 10:05:22  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 71.72 Mbit/s  
95th percentile per-packet one-way delay: 688.675 ms  
Loss rate: 1.34%  
-- Flow 1:  
Average throughput: 59.02 Mbit/s  
95th percentile per-packet one-way delay: 695.851 ms  
Loss rate: 1.51%  
-- Flow 2:  
Average throughput: 16.58 Mbit/s  
95th percentile per-packet one-way delay: 150.210 ms  
Loss rate: 0.51%  
-- Flow 3:  
Average throughput: 5.30 Mbit/s  
95th percentile per-packet one-way delay: 149.184 ms  
Loss rate: 0.88%

Run 5: Report of PCC-Expr — Data Link

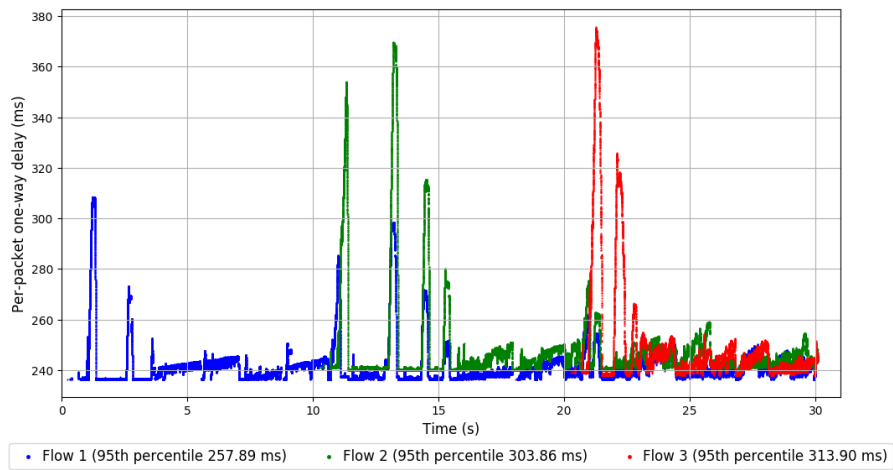
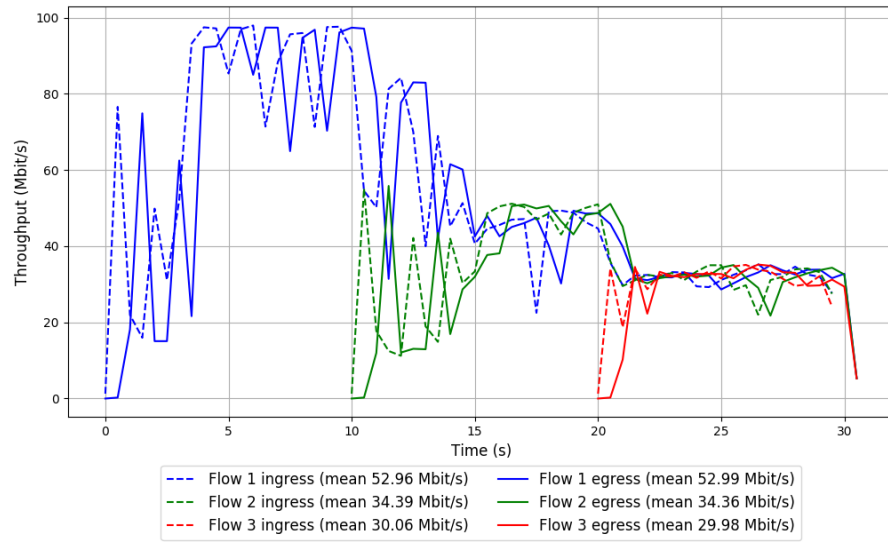


Run 1: Statistics of QUIC Cubic

Start at: 2018-12-20 08:14:49  
End at: 2018-12-20 08:15:19  
Local clock offset: 0.835 ms  
Remote clock offset: -169.19 ms

# Below is generated by plot.py at 2018-12-20 10:05:22  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 85.70 Mbit/s  
95th percentile per-packet one-way delay: 272.318 ms  
Loss rate: 0.35%  
-- Flow 1:  
Average throughput: 52.99 Mbit/s  
95th percentile per-packet one-way delay: 257.894 ms  
Loss rate: 0.19%  
-- Flow 2:  
Average throughput: 34.36 Mbit/s  
95th percentile per-packet one-way delay: 303.858 ms  
Loss rate: 0.45%  
-- Flow 3:  
Average throughput: 29.98 Mbit/s  
95th percentile per-packet one-way delay: 313.897 ms  
Loss rate: 1.01%

## Run 1: Report of QUIC Cubic — Data Link



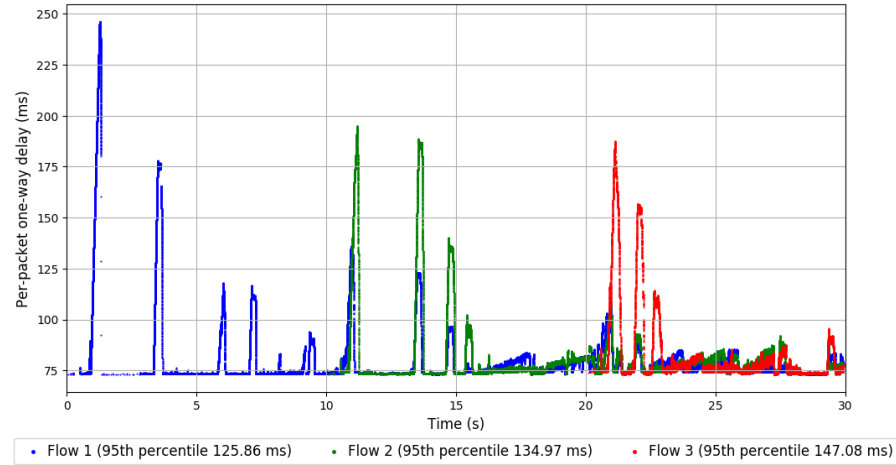
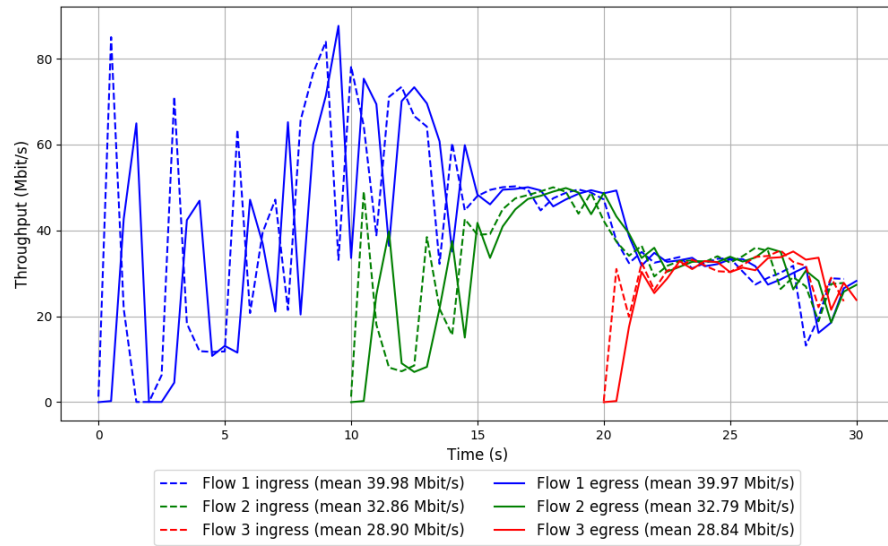


Run 2: Statistics of QUIC Cubic

Start at: 2018-12-20 08:39:09  
End at: 2018-12-20 08:39:39  
Local clock offset: 0.708 ms  
Remote clock offset: -1.134 ms

# Below is generated by plot.py at 2018-12-20 10:05:22  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 71.24 Mbit/s  
95th percentile per-packet one-way delay: 133.805 ms  
Loss rate: 0.47%  
-- Flow 1:  
Average throughput: 39.97 Mbit/s  
95th percentile per-packet one-way delay: 125.861 ms  
Loss rate: 0.28%  
-- Flow 2:  
Average throughput: 32.79 Mbit/s  
95th percentile per-packet one-way delay: 134.970 ms  
Loss rate: 0.58%  
-- Flow 3:  
Average throughput: 28.84 Mbit/s  
95th percentile per-packet one-way delay: 147.076 ms  
Loss rate: 1.00%

## Run 2: Report of QUIC Cubic — Data Link



Run 3: Statistics of QUIC Cubic

Start at: 2018-12-20 09:04:22

End at: 2018-12-20 09:04:52

Local clock offset: 1.651 ms

Remote clock offset: 0.246 ms

# Below is generated by plot.py at 2018-12-20 10:05:22

# Datalink statistics

-- Total of 3 flows:

Average throughput: 60.26 Mbit/s

95th percentile per-packet one-way delay: 126.661 ms

Loss rate: 0.44%

-- Flow 1:

Average throughput: 29.55 Mbit/s

95th percentile per-packet one-way delay: 84.030 ms

Loss rate: 0.26%

-- Flow 2:

Average throughput: 29.14 Mbit/s

95th percentile per-packet one-way delay: 138.434 ms

Loss rate: 0.17%

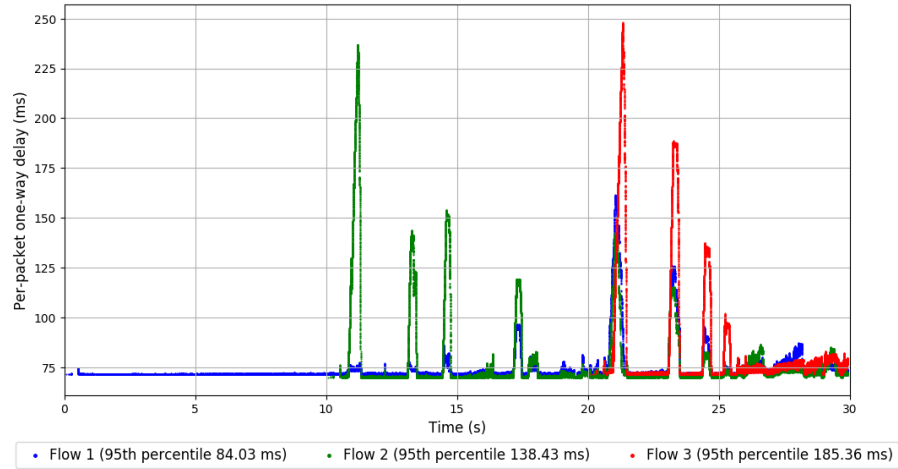
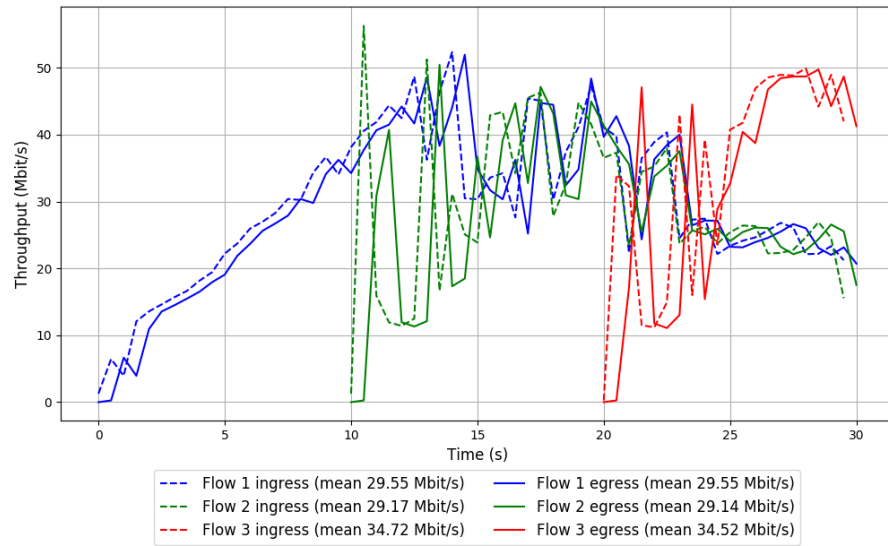
-- Flow 3:

Average throughput: 34.52 Mbit/s

95th percentile per-packet one-way delay: 185.356 ms

Loss rate: 1.34%

### Run 3: Report of QUIC Cubic — Data Link

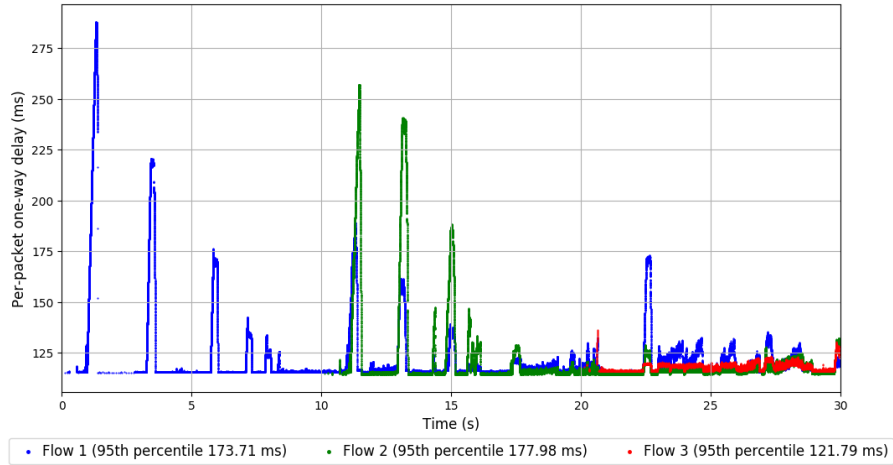
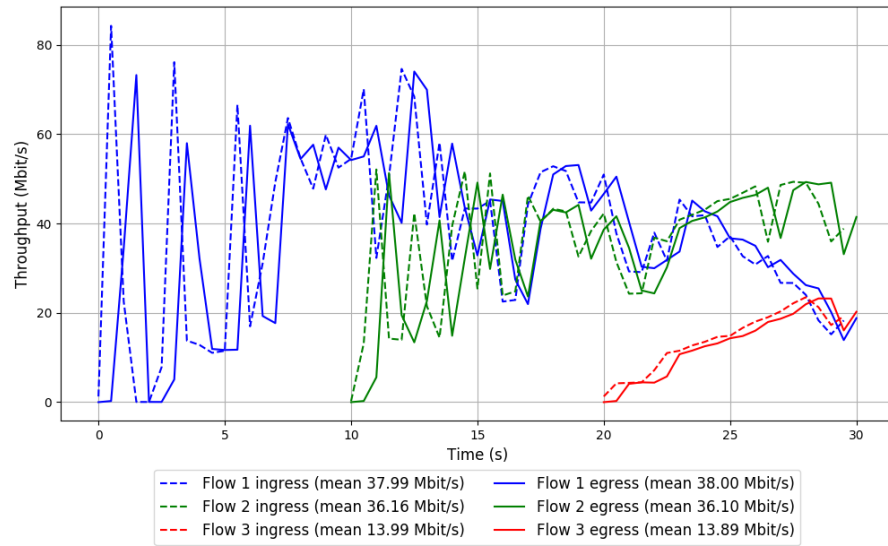


Run 4: Statistics of QUIC Cubic

Start at: 2018-12-20 09:28:51  
End at: 2018-12-20 09:29:21  
Local clock offset: 0.716 ms  
Remote clock offset: -43.162 ms

# Below is generated by plot.py at 2018-12-20 10:05:22  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 66.57 Mbit/s  
95th percentile per-packet one-way delay: 171.681 ms  
Loss rate: 0.43%  
-- Flow 1:  
Average throughput: 38.00 Mbit/s  
95th percentile per-packet one-way delay: 173.706 ms  
Loss rate: 0.21%  
-- Flow 2:  
Average throughput: 36.10 Mbit/s  
95th percentile per-packet one-way delay: 177.978 ms  
Loss rate: 0.57%  
-- Flow 3:  
Average throughput: 13.89 Mbit/s  
95th percentile per-packet one-way delay: 121.786 ms  
Loss rate: 1.45%

#### Run 4: Report of QUIC Cubic — Data Link

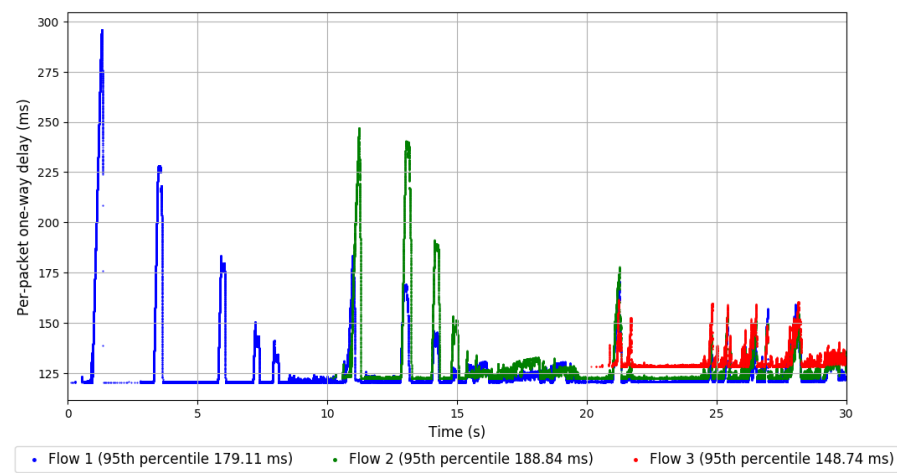
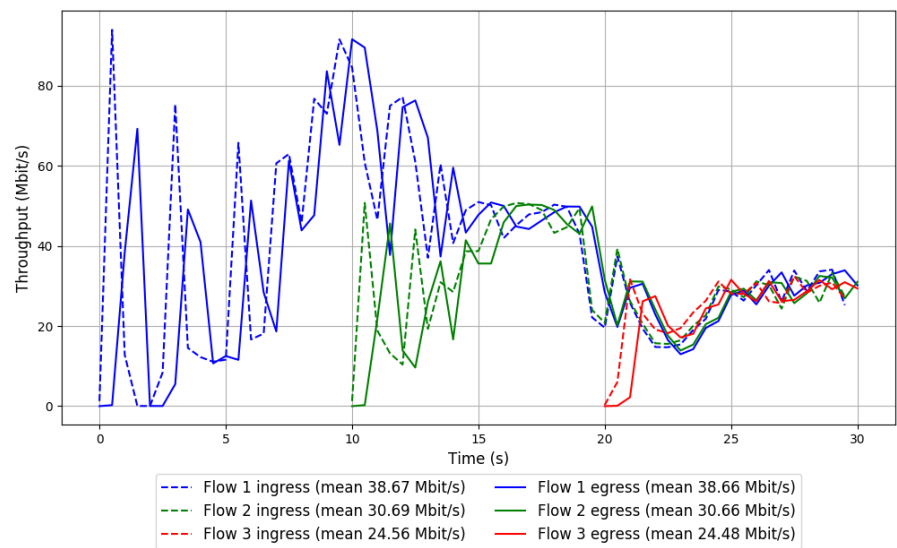


Run 5: Statistics of QUIC Cubic

Start at: 2018-12-20 09:54:52  
End at: 2018-12-20 09:55:22  
Local clock offset: -0.089 ms  
Remote clock offset: -47.048 ms

# Below is generated by plot.py at 2018-12-20 10:05:22  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 67.09 Mbit/s  
95th percentile per-packet one-way delay: 178.782 ms  
Loss rate: 0.39%  
-- Flow 1:  
Average throughput: 38.66 Mbit/s  
95th percentile per-packet one-way delay: 179.114 ms  
Loss rate: 0.20%  
-- Flow 2:  
Average throughput: 30.66 Mbit/s  
95th percentile per-packet one-way delay: 188.842 ms  
Loss rate: 0.46%  
-- Flow 3:  
Average throughput: 24.48 Mbit/s  
95th percentile per-packet one-way delay: 148.742 ms  
Loss rate: 1.12%

Run 5: Report of QUIC Cubic — Data Link



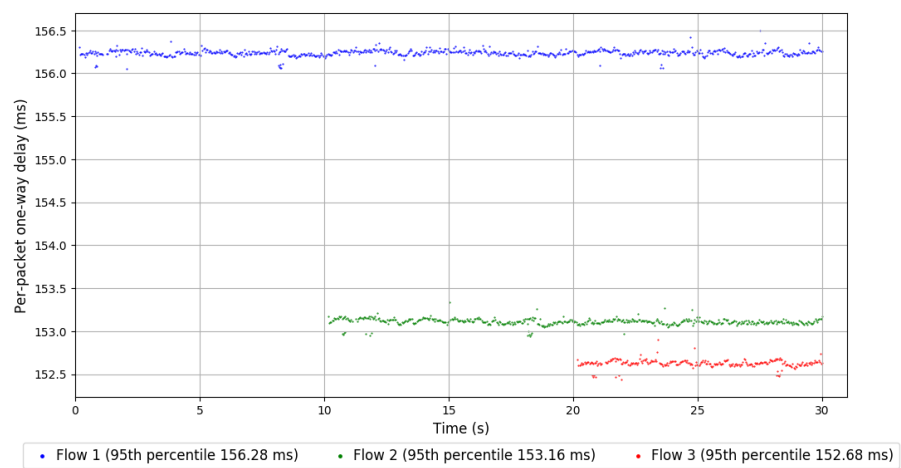
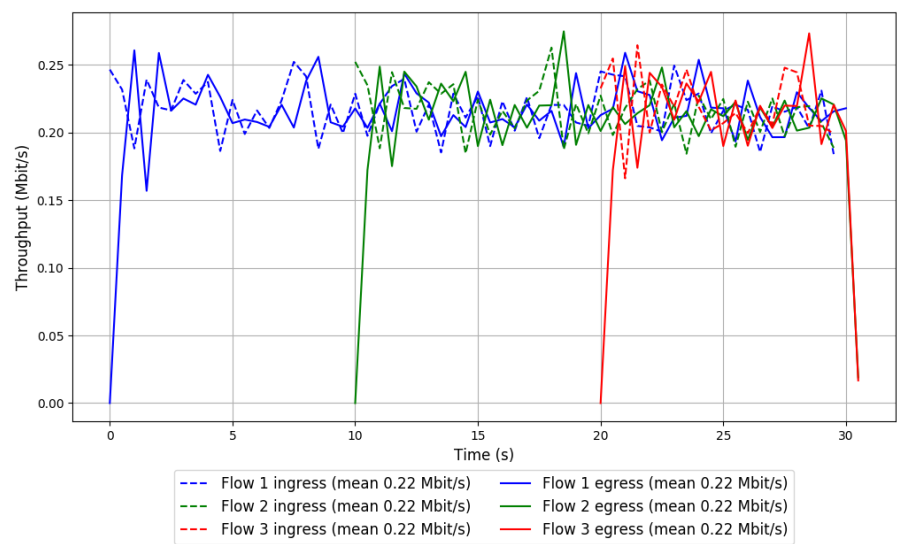


```
Run 1: Statistics of SReAM

Start at: 2018-12-20 08:13:39
End at: 2018-12-20 08:14:09
Local clock offset: -0.172 ms
Remote clock offset: -86.327 ms

# Below is generated by plot.py at 2018-12-20 10:05:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 156.274 ms
Loss rate: 0.38%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 156.284 ms
Loss rate: 0.26%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 153.161 ms
Loss rate: 0.39%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 152.676 ms
Loss rate: 0.70%
```

Run 1: Report of SReAM — Data Link

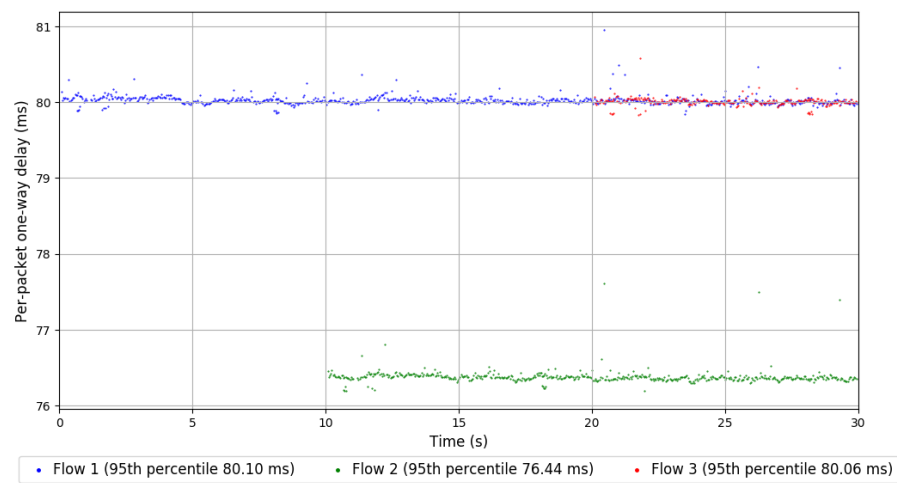
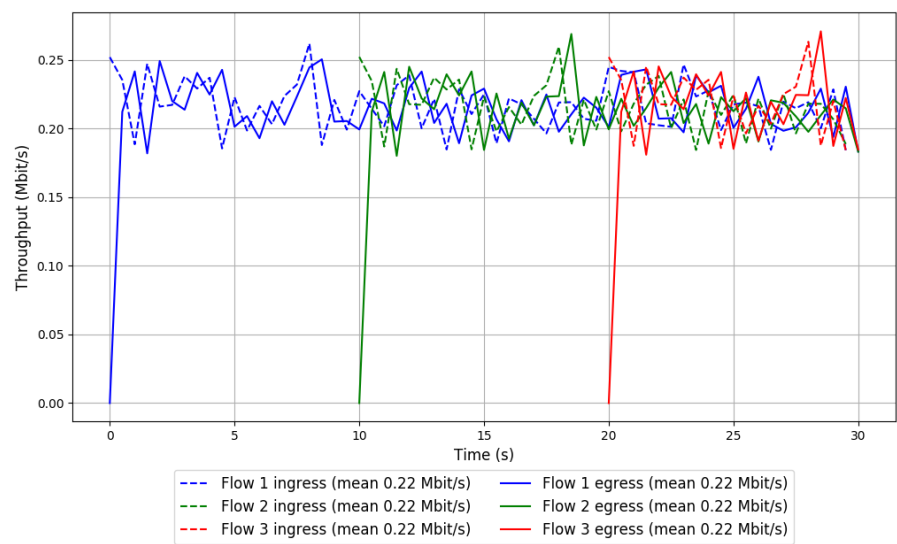


Run 2: Statistics of SCReAM

Start at: 2018-12-20 08:38:00  
End at: 2018-12-20 08:38:30  
Local clock offset: 0.922 ms  
Remote clock offset: -7.513 ms

# Below is generated by plot.py at 2018-12-20 10:05:22  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 0.43 Mbit/s  
95th percentile per-packet one-way delay: 80.078 ms  
Loss rate: 0.38%  
-- Flow 1:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 80.100 ms  
Loss rate: 0.26%  
-- Flow 2:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 76.445 ms  
Loss rate: 0.40%  
-- Flow 3:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 80.055 ms  
Loss rate: 0.71%

Run 2: Report of SReAM — Data Link

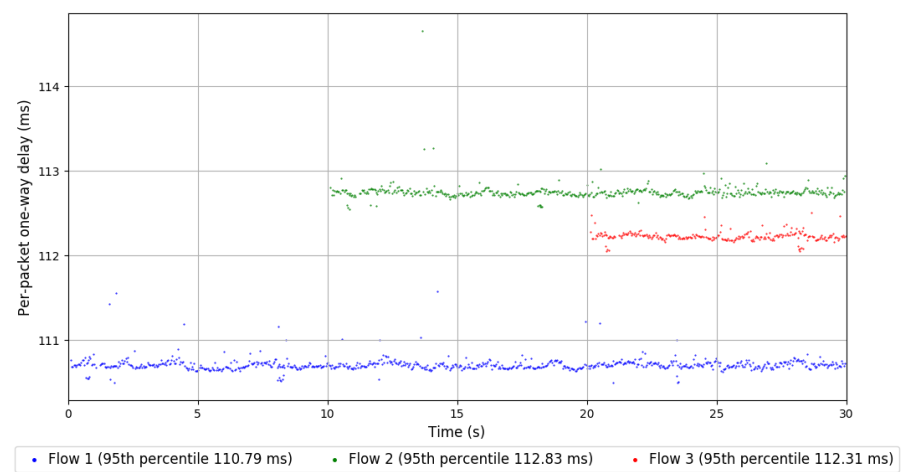
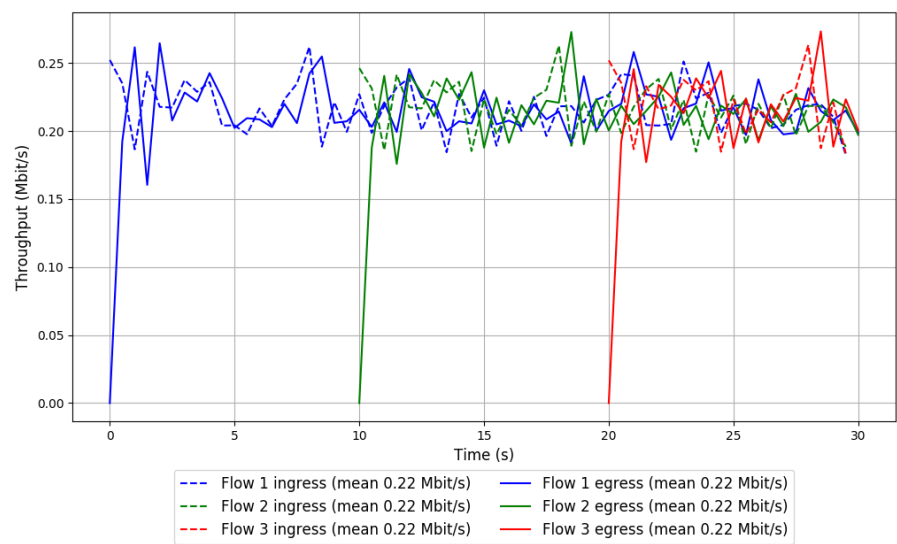


Run 3: Statistics of SReAM

Start at: 2018-12-20 09:03:13  
End at: 2018-12-20 09:03:43  
Local clock offset: -0.888 ms  
Remote clock offset: -43.019 ms

# Below is generated by plot.py at 2018-12-20 10:05:22  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 0.43 Mbit/s  
95th percentile per-packet one-way delay: 112.778 ms  
Loss rate: 0.38%  
-- Flow 1:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 110.786 ms  
Loss rate: 0.26%  
-- Flow 2:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 112.826 ms  
Loss rate: 0.40%  
-- Flow 3:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 112.308 ms  
Loss rate: 0.71%

Run 3: Report of SReAM — Data Link

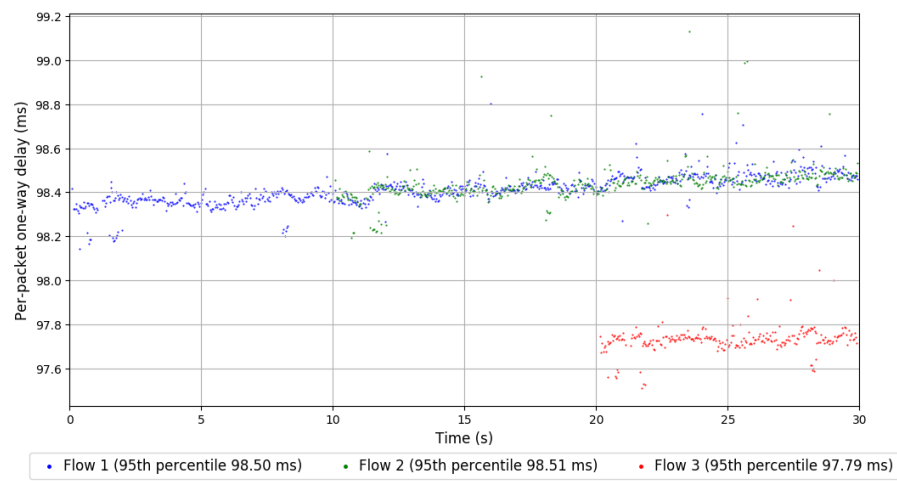
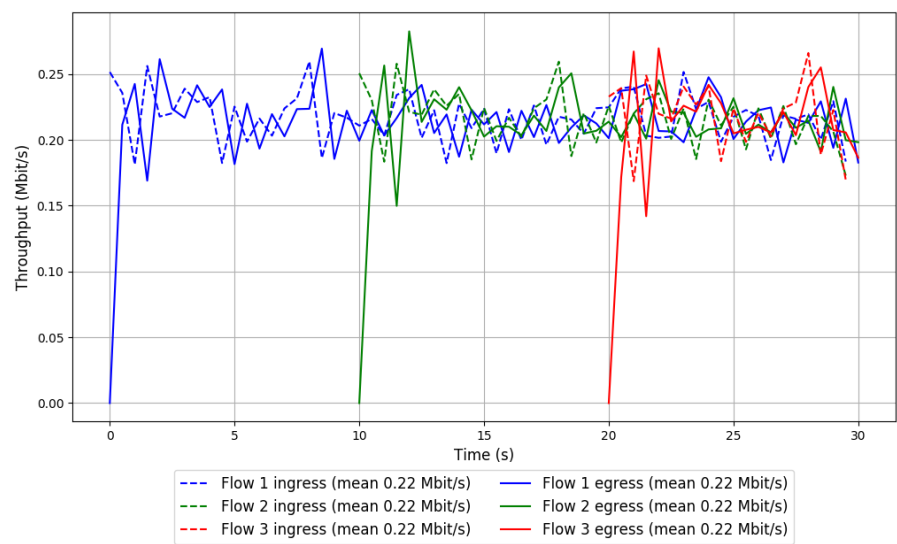


Run 4: Statistics of SReAM

Start at: 2018-12-20 09:27:42  
End at: 2018-12-20 09:28:12  
Local clock offset: -2.234 ms  
Remote clock offset: -30.787 ms

# Below is generated by plot.py at 2018-12-20 10:05:22  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 0.43 Mbit/s  
95th percentile per-packet one-way delay: 98.500 ms  
Loss rate: 0.32%  
-- Flow 1:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 98.503 ms  
Loss rate: 0.26%  
-- Flow 2:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 98.507 ms  
Loss rate: 0.20%  
-- Flow 3:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 97.793 ms  
Loss rate: 0.76%

Run 4: Report of SReAM — Data Link



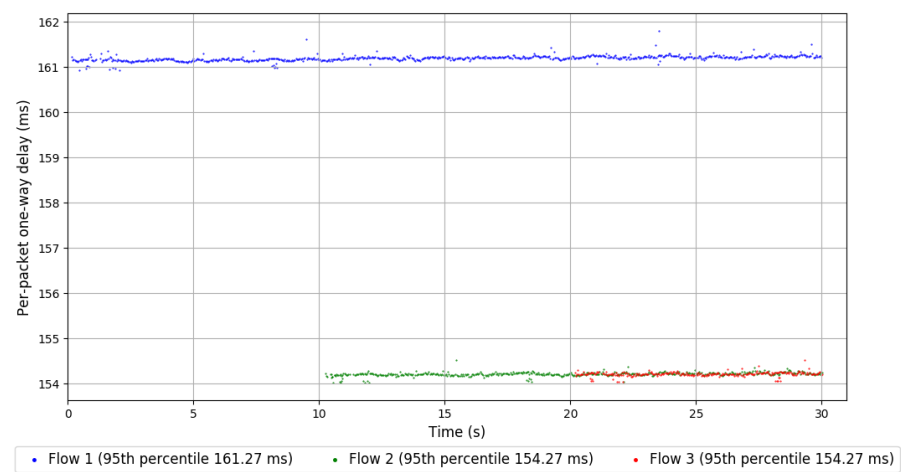
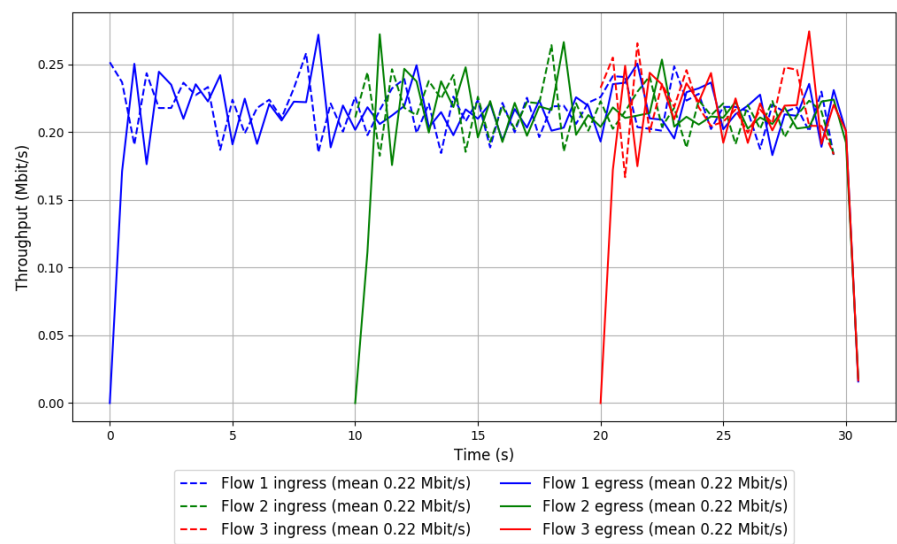


Run 5: Statistics of SCReAM

Start at: 2018-12-20 09:53:43  
End at: 2018-12-20 09:54:13  
Local clock offset: 2.418 ms  
Remote clock offset: -77.107 ms

# Below is generated by plot.py at 2018-12-20 10:05:22  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 0.43 Mbit/s  
95th percentile per-packet one-way delay: 161.256 ms  
Loss rate: 0.33%  
-- Flow 1:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 161.271 ms  
Loss rate: 0.26%  
-- Flow 2:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 154.268 ms  
Loss rate: 0.43%  
-- Flow 3:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 154.266 ms  
Loss rate: 0.35%

Run 5: Report of SReAM — Data Link

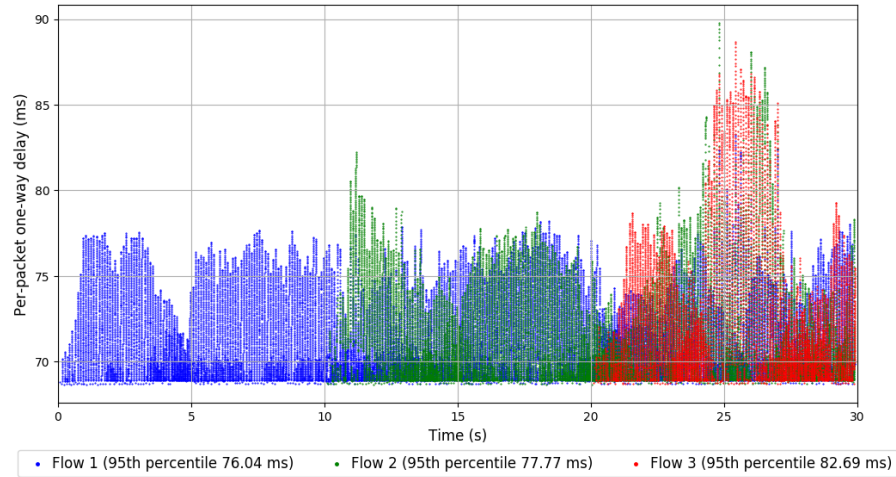
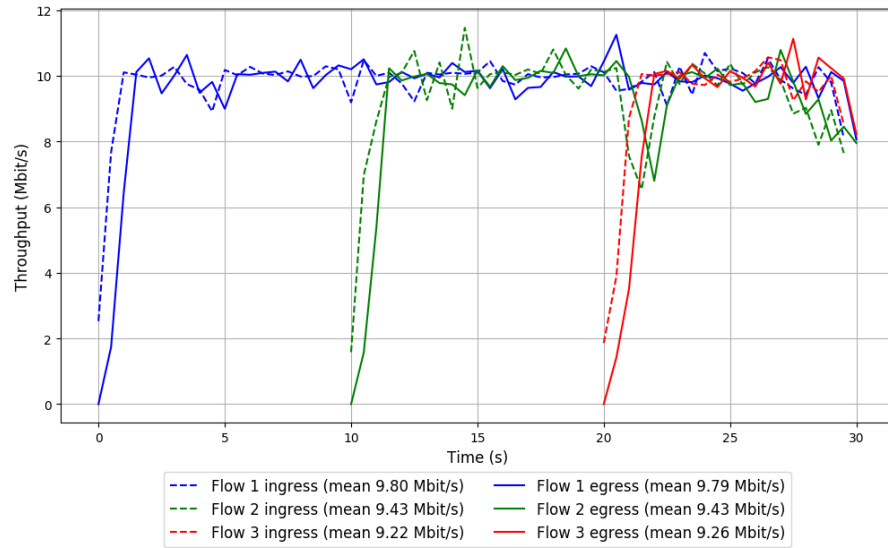


Run 1: Statistics of Sprout

Start at: 2018-12-20 07:55:25  
End at: 2018-12-20 07:55:55  
Local clock offset: -1.06 ms  
Remote clock offset: -0.593 ms

# Below is generated by plot.py at 2018-12-20 10:05:22  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 19.09 Mbit/s  
95th percentile per-packet one-way delay: 77.238 ms  
Loss rate: 0.35%  
-- Flow 1:  
Average throughput: 9.79 Mbit/s  
95th percentile per-packet one-way delay: 76.036 ms  
Loss rate: 0.32%  
-- Flow 2:  
Average throughput: 9.43 Mbit/s  
95th percentile per-packet one-way delay: 77.771 ms  
Loss rate: 0.43%  
-- Flow 3:  
Average throughput: 9.26 Mbit/s  
95th percentile per-packet one-way delay: 82.689 ms  
Loss rate: 0.28%

## Run 1: Report of Sprout — Data Link

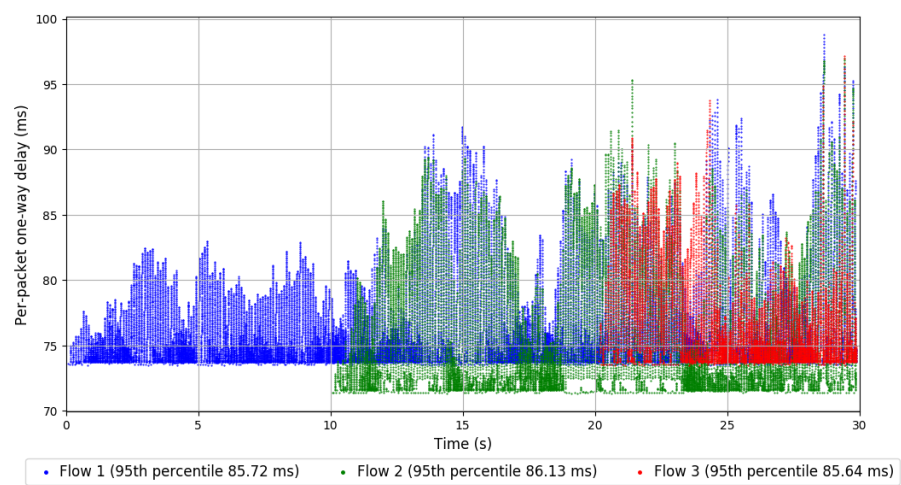
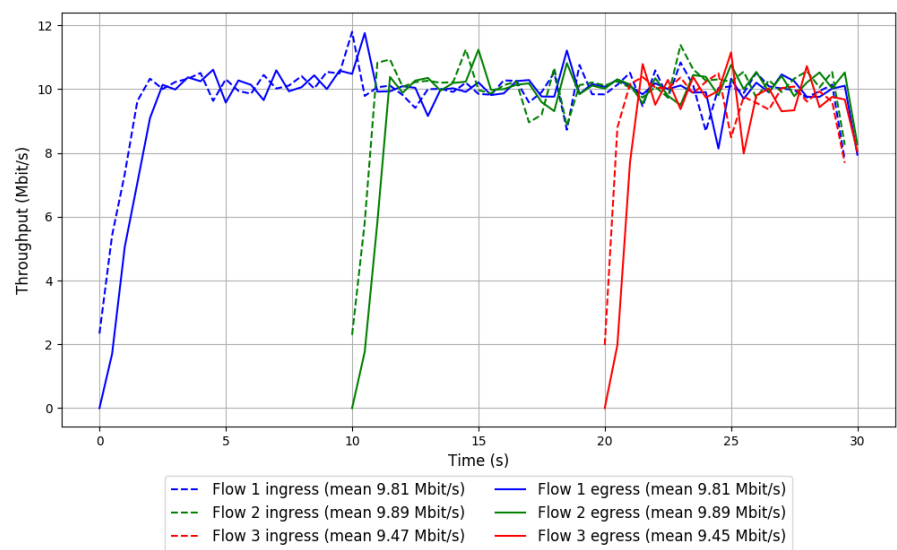


Run 2: Statistics of Sprout

Start at: 2018-12-20 08:19:42  
End at: 2018-12-20 08:20:12  
Local clock offset: 0.433 ms  
Remote clock offset: -3.098 ms

# Below is generated by plot.py at 2018-12-20 10:05:22  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 19.47 Mbit/s  
95th percentile per-packet one-way delay: 85.872 ms  
Loss rate: 0.44%  
-- Flow 1:  
Average throughput: 9.81 Mbit/s  
95th percentile per-packet one-way delay: 85.715 ms  
Loss rate: 0.29%  
-- Flow 2:  
Average throughput: 9.89 Mbit/s  
95th percentile per-packet one-way delay: 86.131 ms  
Loss rate: 0.49%  
-- Flow 3:  
Average throughput: 9.45 Mbit/s  
95th percentile per-packet one-way delay: 85.641 ms  
Loss rate: 0.82%

Run 2: Report of Sprout — Data Link

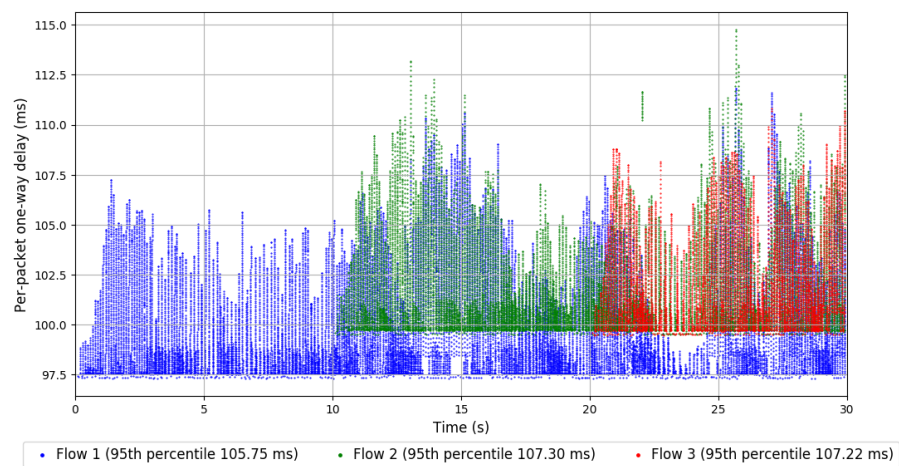
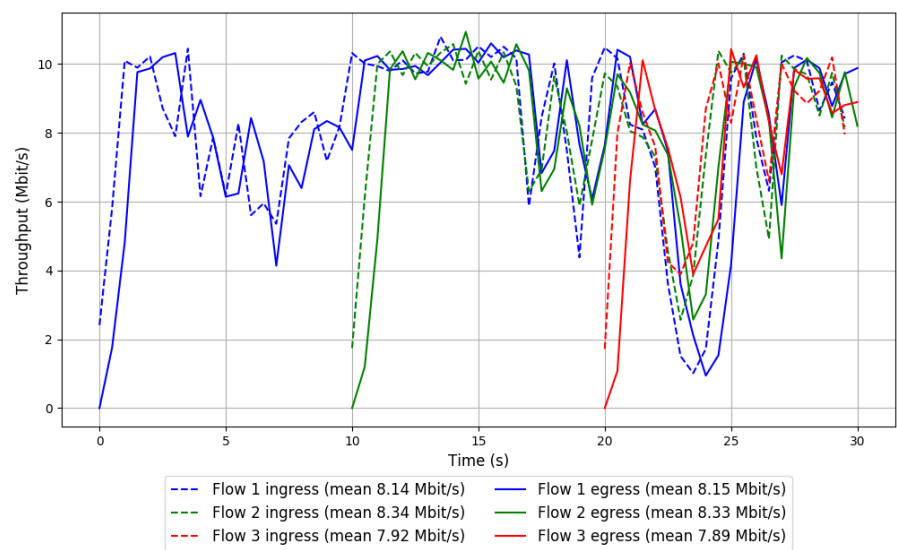


### Run 3: Statistics of Sprout

Start at: 2018-12-20 08:44:03  
End at: 2018-12-20 08:44:33  
Local clock offset: -0.267 ms  
Remote clock offset: -28.799 ms

```
# Below is generated by plot.py at 2018-12-20 10:05:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 16.27 Mbit/s
95th percentile per-packet one-way delay: 106.755 ms
Loss rate: 0.46%
-- Flow 1:
Average throughput: 8.15 Mbit/s
95th percentile per-packet one-way delay: 105.752 ms
Loss rate: 0.10%
-- Flow 2:
Average throughput: 8.33 Mbit/s
95th percentile per-packet one-way delay: 107.302 ms
Loss rate: 0.59%
-- Flow 3:
Average throughput: 7.89 Mbit/s
95th percentile per-packet one-way delay: 107.225 ms
Loss rate: 1.27%
```

Run 3: Report of Sprout — Data Link



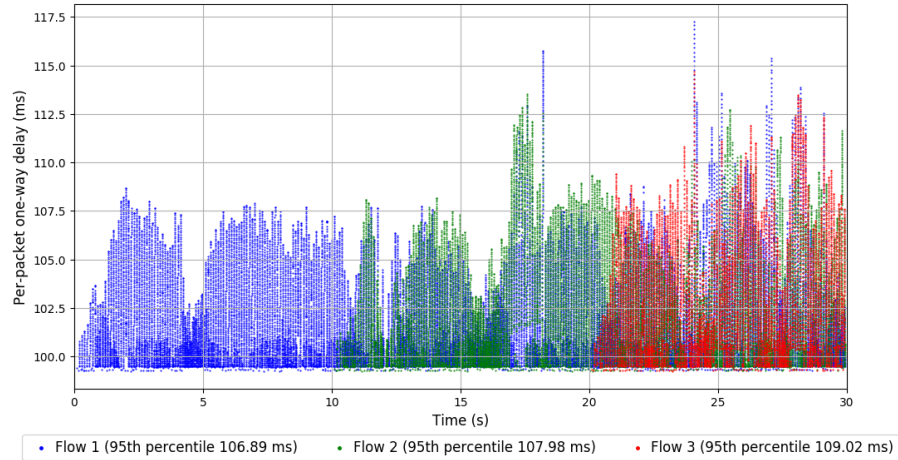
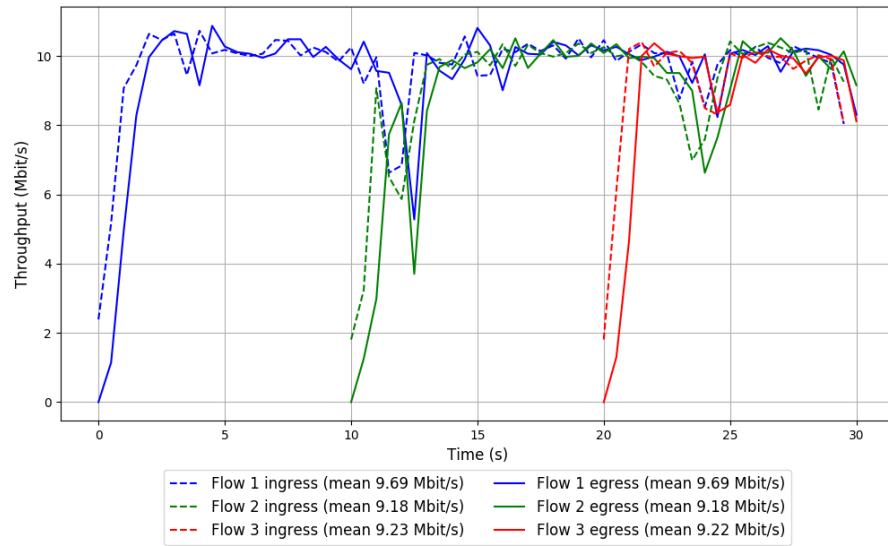


#### Run 4: Statistics of Sprout

Start at: 2018-12-20 09:09:38  
End at: 2018-12-20 09:10:08  
Local clock offset: -2.528 ms  
Remote clock offset: -31.631 ms

```
# Below is generated by plot.py at 2018-12-20 10:05:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 18.81 Mbit/s
95th percentile per-packet one-way delay: 107.695 ms
Loss rate: 0.46%
-- Flow 1:
Average throughput: 9.69 Mbit/s
95th percentile per-packet one-way delay: 106.887 ms
Loss rate: 0.28%
-- Flow 2:
Average throughput: 9.18 Mbit/s
95th percentile per-packet one-way delay: 107.980 ms
Loss rate: 0.45%
-- Flow 3:
Average throughput: 9.22 Mbit/s
95th percentile per-packet one-way delay: 109.018 ms
Loss rate: 1.08%
```

#### Run 4: Report of Sprout — Data Link

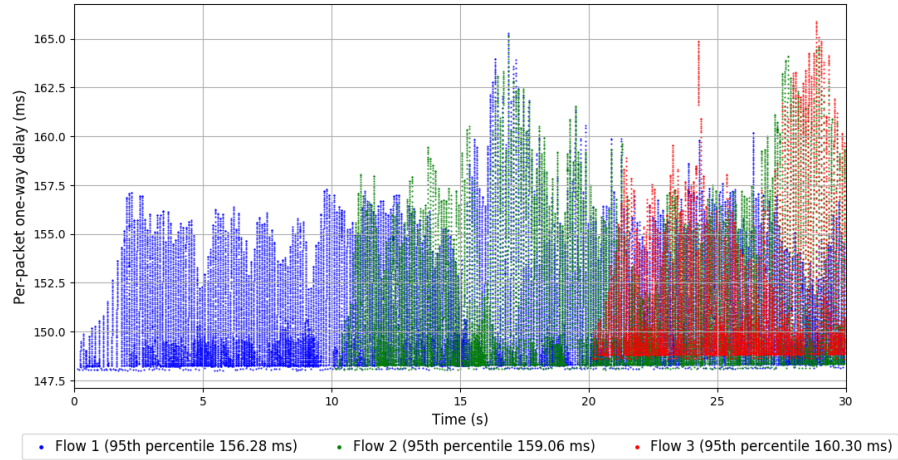
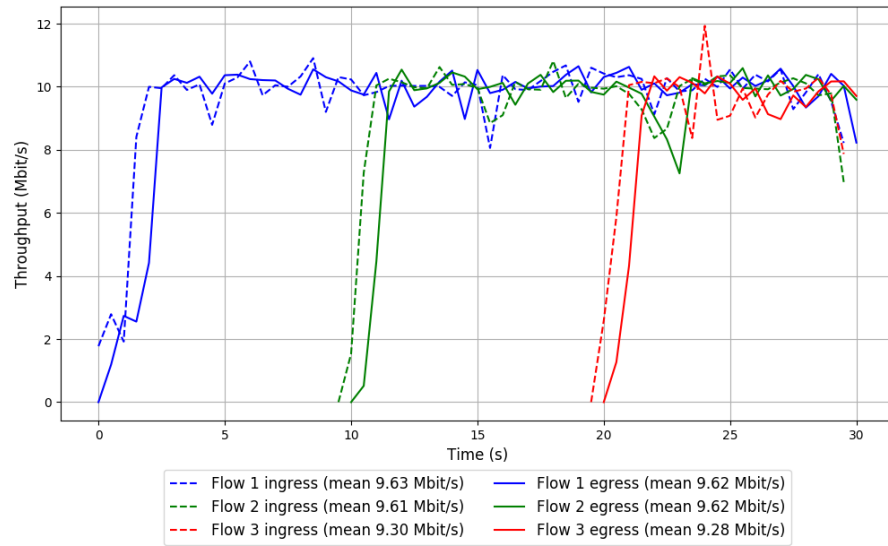


Run 5: Statistics of Sprout

Start at: 2018-12-20 09:34:26  
End at: 2018-12-20 09:34:56  
Local clock offset: 0.858 ms  
Remote clock offset: -74.352 ms

# Below is generated by plot.py at 2018-12-20 10:05:22  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 19.06 Mbit/s  
95th percentile per-packet one-way delay: 158.034 ms  
Loss rate: 0.43%  
-- Flow 1:  
Average throughput: 9.62 Mbit/s  
95th percentile per-packet one-way delay: 156.277 ms  
Loss rate: 0.35%  
-- Flow 2:  
Average throughput: 9.62 Mbit/s  
95th percentile per-packet one-way delay: 159.063 ms  
Loss rate: 0.28%  
-- Flow 3:  
Average throughput: 9.28 Mbit/s  
95th percentile per-packet one-way delay: 160.298 ms  
Loss rate: 0.99%

# Run 5: Report of Sprout — Data Link

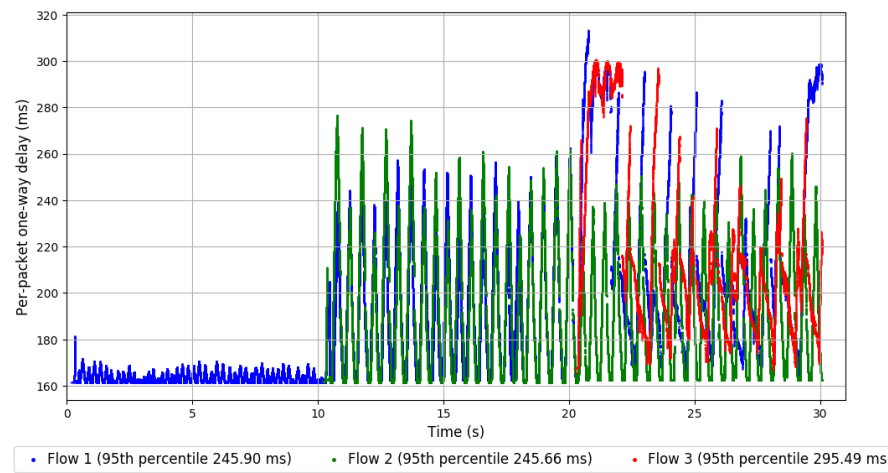
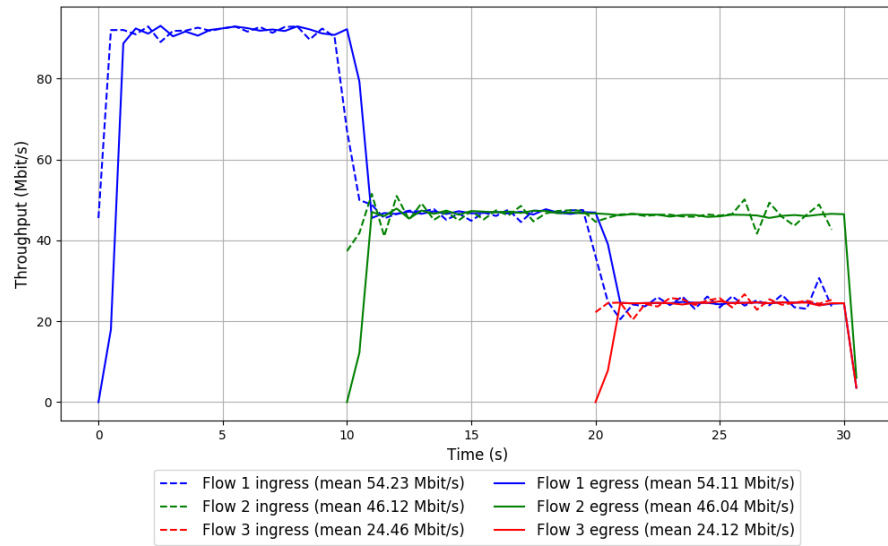


```
Run 1: Statistics of TaoVA-100x

Start at: 2018-12-20 08:01:52
End at: 2018-12-20 08:02:22
Local clock offset: -0.849 ms
Remote clock offset: -96.319 ms

# Below is generated by plot.py at 2018-12-20 10:06:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.72 Mbit/s
95th percentile per-packet one-way delay: 252.243 ms
Loss rate: 0.63%
-- Flow 1:
Average throughput: 54.11 Mbit/s
95th percentile per-packet one-way delay: 245.898 ms
Loss rate: 0.46%
-- Flow 2:
Average throughput: 46.04 Mbit/s
95th percentile per-packet one-way delay: 245.660 ms
Loss rate: 0.54%
-- Flow 3:
Average throughput: 24.12 Mbit/s
95th percentile per-packet one-way delay: 295.490 ms
Loss rate: 2.17%
```

# Run 1: Report of TaoVA-100x — Data Link

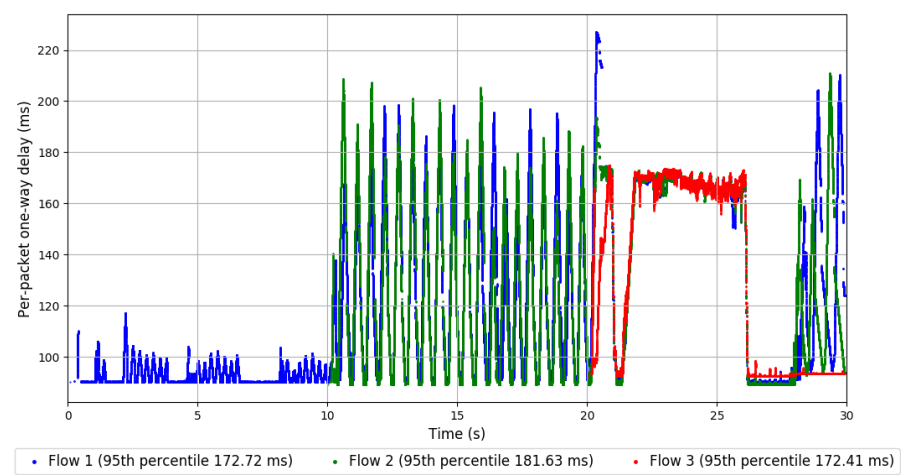
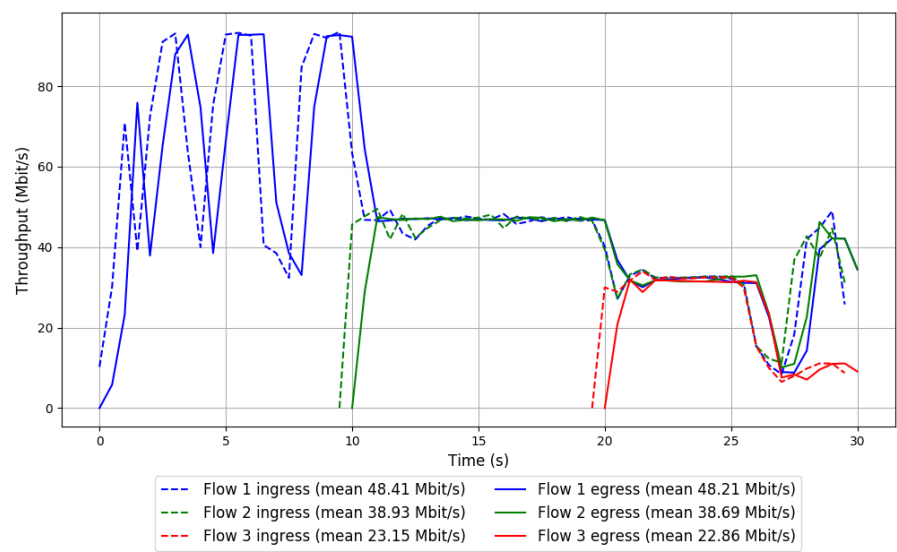


Run 2: Statistics of TaoVA-100x

Start at: 2018-12-20 08:26:26  
End at: 2018-12-20 08:26:56  
Local clock offset: 0.631 ms  
Remote clock offset: -21.514 ms

# Below is generated by plot.py at 2018-12-20 10:06:59  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 81.61 Mbit/s  
95th percentile per-packet one-way delay: 174.185 ms  
Loss rate: 0.90%  
-- Flow 1:  
Average throughput: 48.21 Mbit/s  
95th percentile per-packet one-way delay: 172.721 ms  
Loss rate: 0.67%  
-- Flow 2:  
Average throughput: 38.69 Mbit/s  
95th percentile per-packet one-way delay: 181.627 ms  
Loss rate: 1.00%  
-- Flow 3:  
Average throughput: 22.86 Mbit/s  
95th percentile per-packet one-way delay: 172.410 ms  
Loss rate: 2.00%

Run 2: Report of TaoVA-100x — Data Link



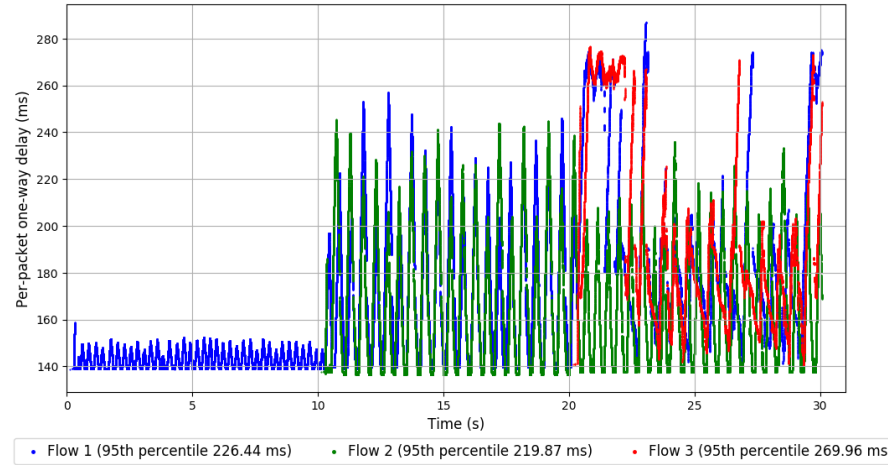
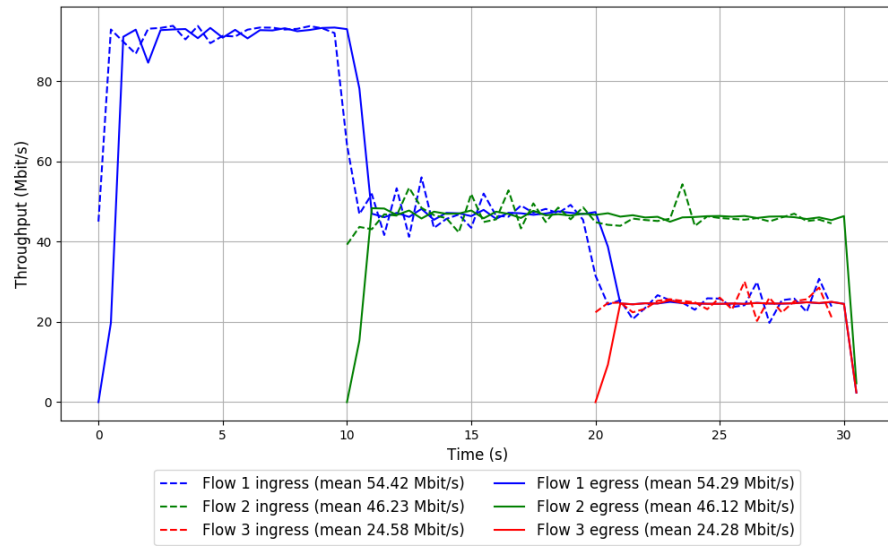


Run 3: Statistics of TaoVA-100x

Start at: 2018-12-20 08:50:31  
End at: 2018-12-20 08:51:01  
Local clock offset: -2.209 ms  
Remote clock offset: -73.601 ms

# Below is generated by plot.py at 2018-12-20 10:07:03  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 93.01 Mbit/s  
95th percentile per-packet one-way delay: 231.396 ms  
Loss rate: 0.66%  
-- Flow 1:  
Average throughput: 54.29 Mbit/s  
95th percentile per-packet one-way delay: 226.443 ms  
Loss rate: 0.49%  
-- Flow 2:  
Average throughput: 46.12 Mbit/s  
95th percentile per-packet one-way delay: 219.873 ms  
Loss rate: 0.61%  
-- Flow 3:  
Average throughput: 24.28 Mbit/s  
95th percentile per-packet one-way delay: 269.964 ms  
Loss rate: 1.99%

### Run 3: Report of TaoVA-100x — Data Link

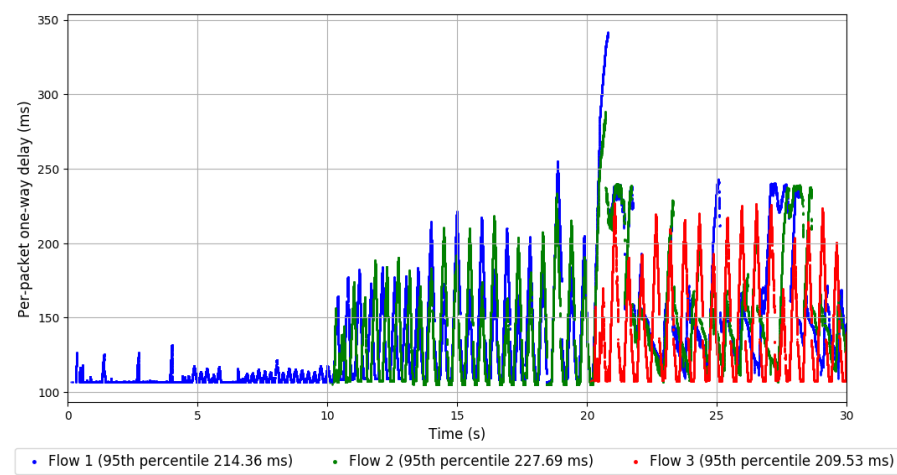
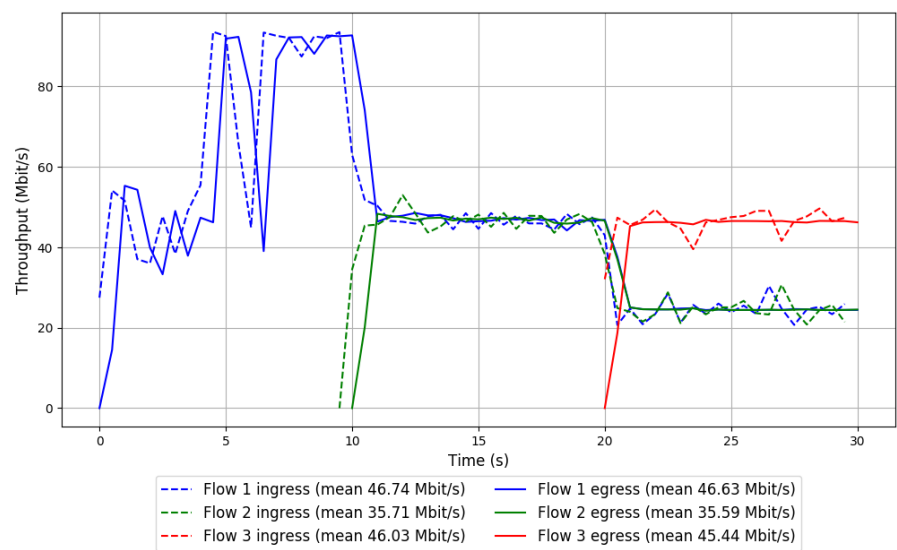


Run 4: Statistics of TaoVA-100x

Start at: 2018-12-20 09:16:08  
End at: 2018-12-20 09:16:38  
Local clock offset: 0.111 ms  
Remote clock offset: -36.156 ms

# Below is generated by plot.py at 2018-12-20 10:07:03  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 85.36 Mbit/s  
95th percentile per-packet one-way delay: 216.508 ms  
Loss rate: 0.80%  
-- Flow 1:  
Average throughput: 46.63 Mbit/s  
95th percentile per-packet one-way delay: 214.356 ms  
Loss rate: 0.44%  
-- Flow 2:  
Average throughput: 35.59 Mbit/s  
95th percentile per-packet one-way delay: 227.688 ms  
Loss rate: 0.69%  
-- Flow 3:  
Average throughput: 45.44 Mbit/s  
95th percentile per-packet one-way delay: 209.532 ms  
Loss rate: 2.06%

Run 4: Report of TaoVA-100x — Data Link



Run 5: Statistics of TaoVA-100x

Start at: 2018-12-20 09:41:13

End at: 2018-12-20 09:41:43

Local clock offset: 1.076 ms

Remote clock offset: 4.803 ms

# Below is generated by plot.py at 2018-12-20 10:07:03

# Datalink statistics

-- Total of 3 flows:

Average throughput: 78.38 Mbit/s

95th percentile per-packet one-way delay: 134.777 ms

Loss rate: 0.71%

-- Flow 1:

Average throughput: 45.75 Mbit/s

95th percentile per-packet one-way delay: 125.775 ms

Loss rate: 0.42%

-- Flow 2:

Average throughput: 34.91 Mbit/s

95th percentile per-packet one-way delay: 147.218 ms

Loss rate: 0.80%

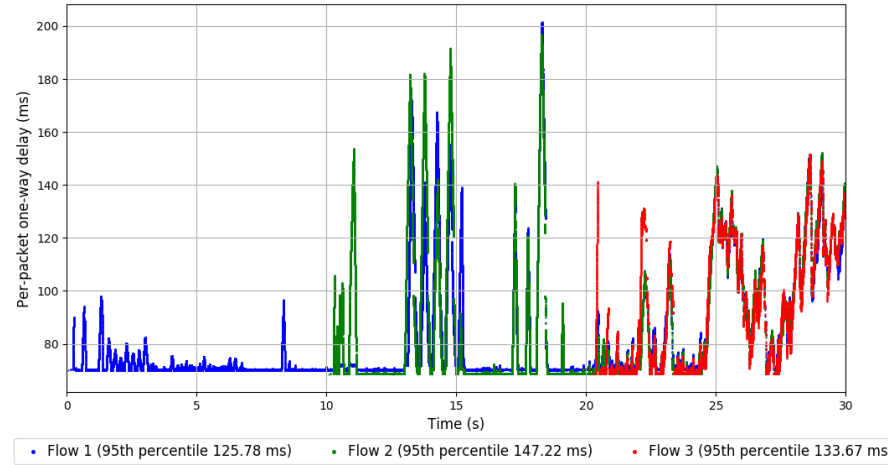
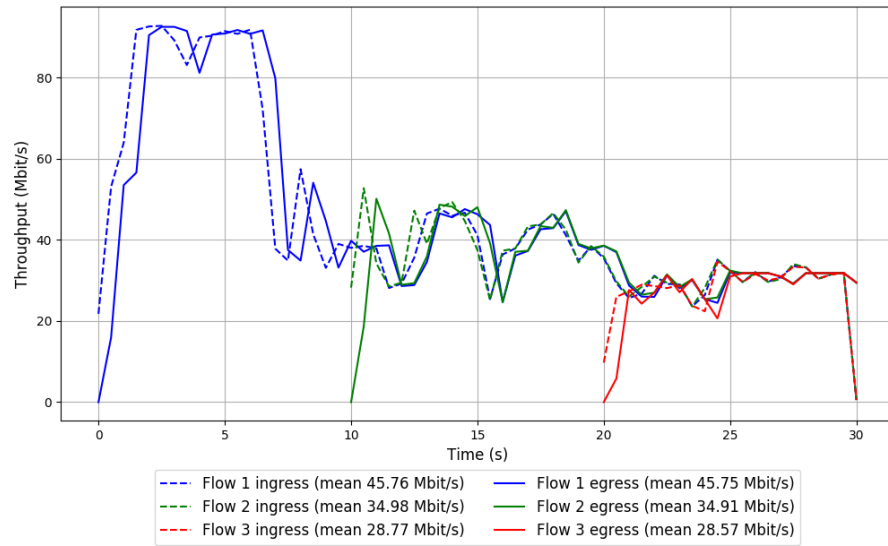
-- Flow 3:

Average throughput: 28.57 Mbit/s

95th percentile per-packet one-way delay: 133.668 ms

Loss rate: 1.87%

# Run 5: Report of TaoVA-100x — Data Link

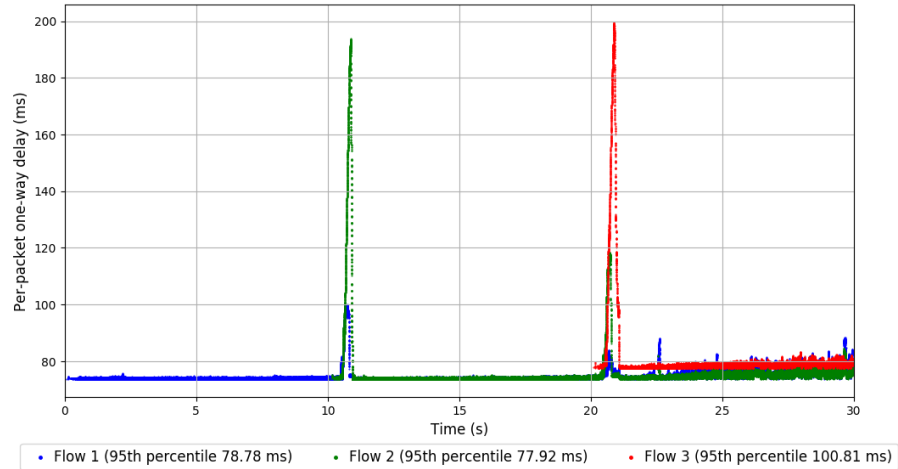
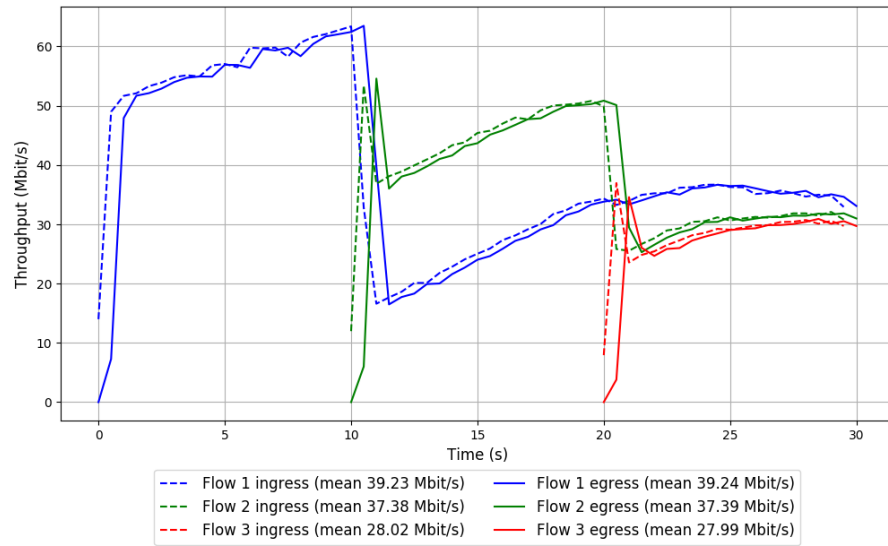


Run 1: Statistics of TCP Vegas

Start at: 2018-12-20 08:04:42  
End at: 2018-12-20 08:05:12  
Local clock offset: -0.669 ms  
Remote clock offset: -8.153 ms

# Below is generated by plot.py at 2018-12-20 10:07:03  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 73.37 Mbit/s  
95th percentile per-packet one-way delay: 79.858 ms  
Loss rate: 0.35%  
-- Flow 1:  
Average throughput: 39.24 Mbit/s  
95th percentile per-packet one-way delay: 78.783 ms  
Loss rate: 0.23%  
-- Flow 2:  
Average throughput: 37.39 Mbit/s  
95th percentile per-packet one-way delay: 77.917 ms  
Loss rate: 0.33%  
-- Flow 3:  
Average throughput: 27.99 Mbit/s  
95th percentile per-packet one-way delay: 100.811 ms  
Loss rate: 0.89%

# Run 1: Report of TCP Vegas — Data Link



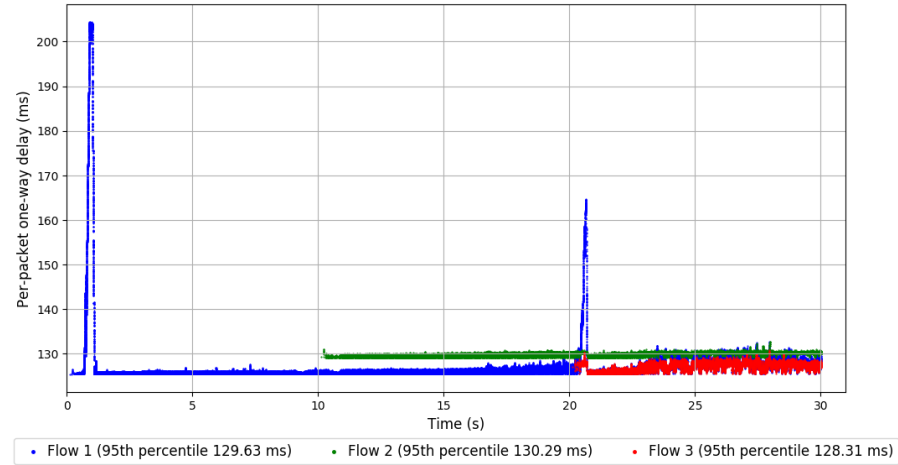
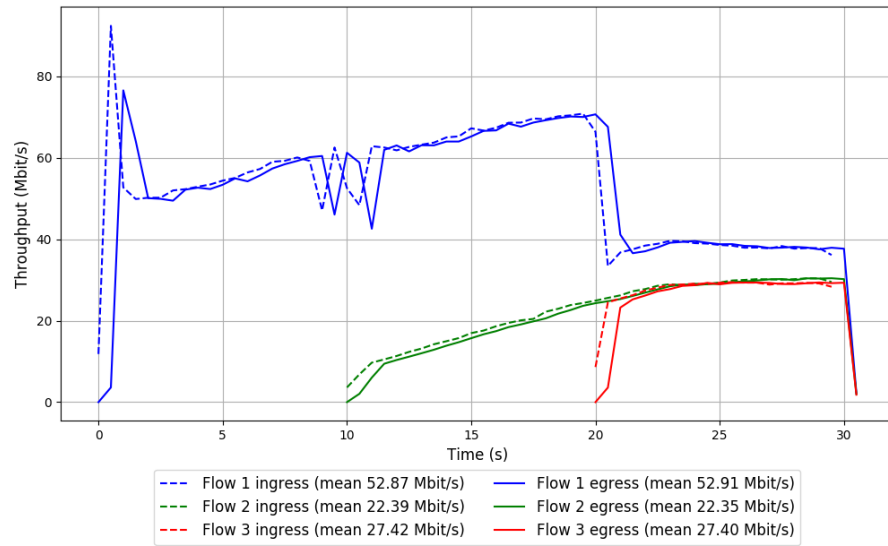


Run 2: Statistics of TCP Vegas

Start at: 2018-12-20 08:29:00  
End at: 2018-12-20 08:29:30  
Local clock offset: 0.784 ms  
Remote clock offset: -54.116 ms

# Below is generated by plot.py at 2018-12-20 10:07:03  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 76.86 Mbit/s  
95th percentile per-packet one-way delay: 130.238 ms  
Loss rate: 0.34%  
-- Flow 1:  
Average throughput: 52.91 Mbit/s  
95th percentile per-packet one-way delay: 129.634 ms  
Loss rate: 0.19%  
-- Flow 2:  
Average throughput: 22.35 Mbit/s  
95th percentile per-packet one-way delay: 130.287 ms  
Loss rate: 0.56%  
-- Flow 3:  
Average throughput: 27.40 Mbit/s  
95th percentile per-packet one-way delay: 128.312 ms  
Loss rate: 0.84%

## Run 2: Report of TCP Vegas — Data Link

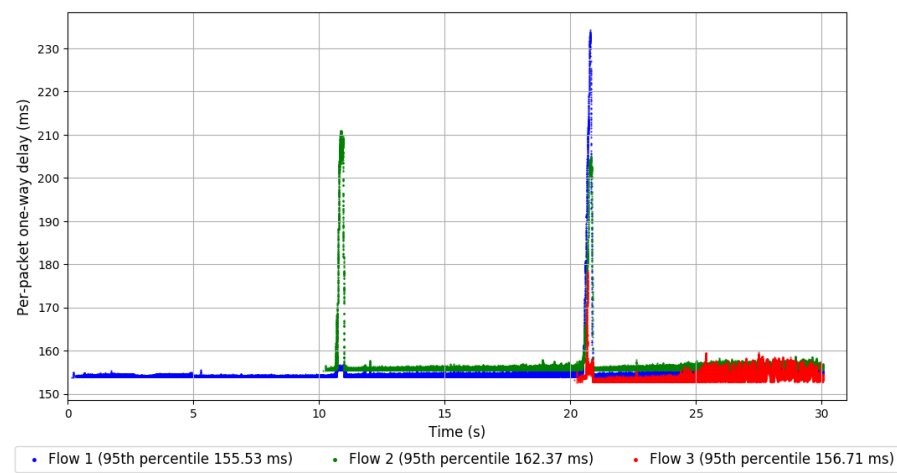
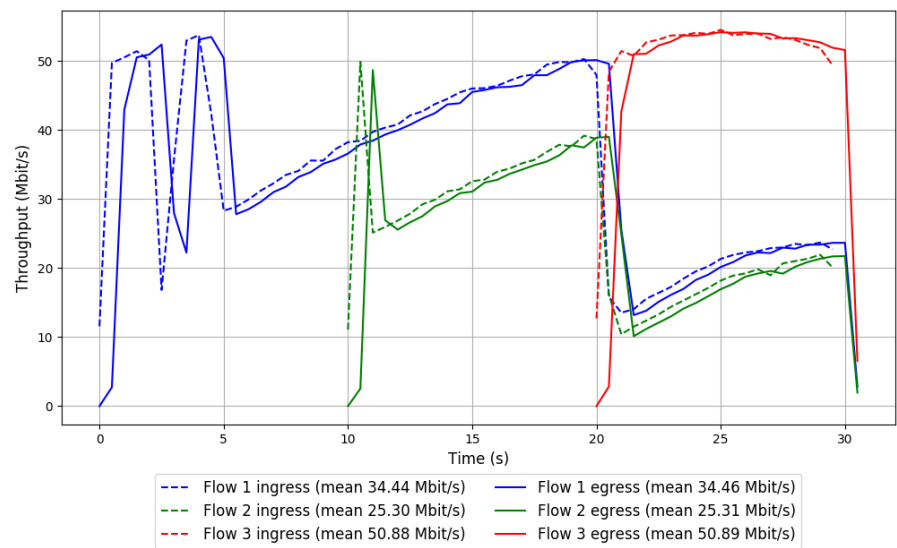


Run 3: Statistics of TCP Vegas

Start at: 2018-12-20 08:53:15  
End at: 2018-12-20 08:53:45  
Local clock offset: -6.725 ms  
Remote clock offset: -94.726 ms

```
# Below is generated by plot.py at 2018-12-20 10:07:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 68.14 Mbit/s
95th percentile per-packet one-way delay: 156.869 ms
Loss rate: 0.35%
-- Flow 1:
Average throughput: 34.46 Mbit/s
95th percentile per-packet one-way delay: 155.529 ms
Loss rate: 0.18%
-- Flow 2:
Average throughput: 25.31 Mbit/s
95th percentile per-packet one-way delay: 162.372 ms
Loss rate: 0.34%
-- Flow 3:
Average throughput: 50.89 Mbit/s
95th percentile per-packet one-way delay: 156.708 ms
Loss rate: 0.73%
```

Run 3: Report of TCP Vegas — Data Link

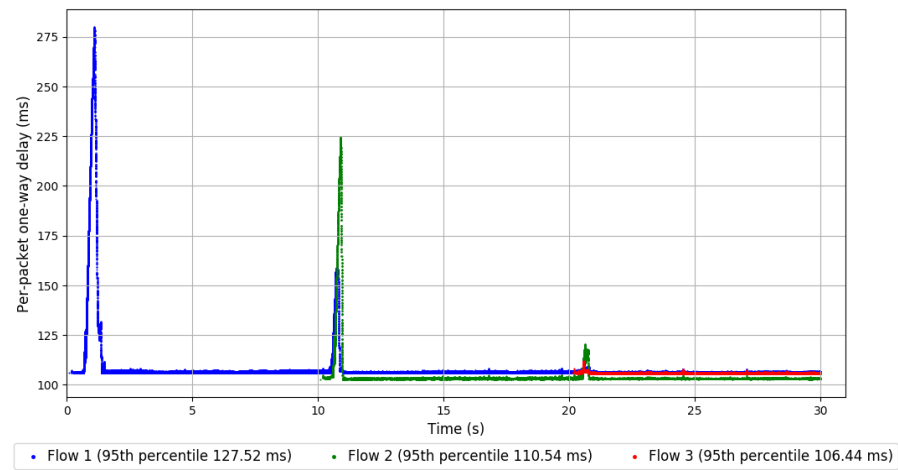
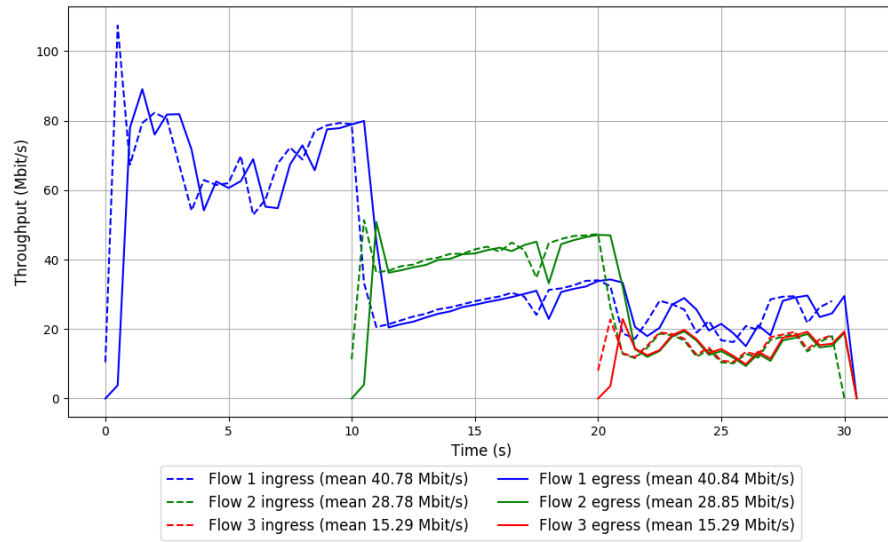


Run 4: Statistics of TCP Vegas

Start at: 2018-12-20 09:18:53  
End at: 2018-12-20 09:19:23  
Local clock offset: -2.039 ms  
Remote clock offset: -37.078 ms

# Below is generated by plot.py at 2018-12-20 10:07:03  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 65.09 Mbit/s  
95th percentile per-packet one-way delay: 116.300 ms  
Loss rate: 0.29%  
-- Flow 1:  
Average throughput: 40.84 Mbit/s  
95th percentile per-packet one-way delay: 127.519 ms  
Loss rate: 0.21%  
-- Flow 2:  
Average throughput: 28.85 Mbit/s  
95th percentile per-packet one-way delay: 110.543 ms  
Loss rate: 0.27%  
-- Flow 3:  
Average throughput: 15.29 Mbit/s  
95th percentile per-packet one-way delay: 106.443 ms  
Loss rate: 1.01%

# Run 4: Report of TCP Vegas — Data Link

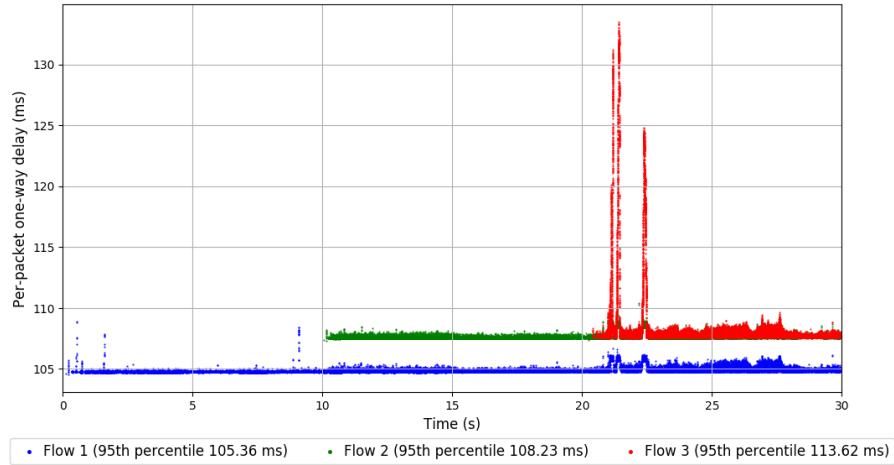
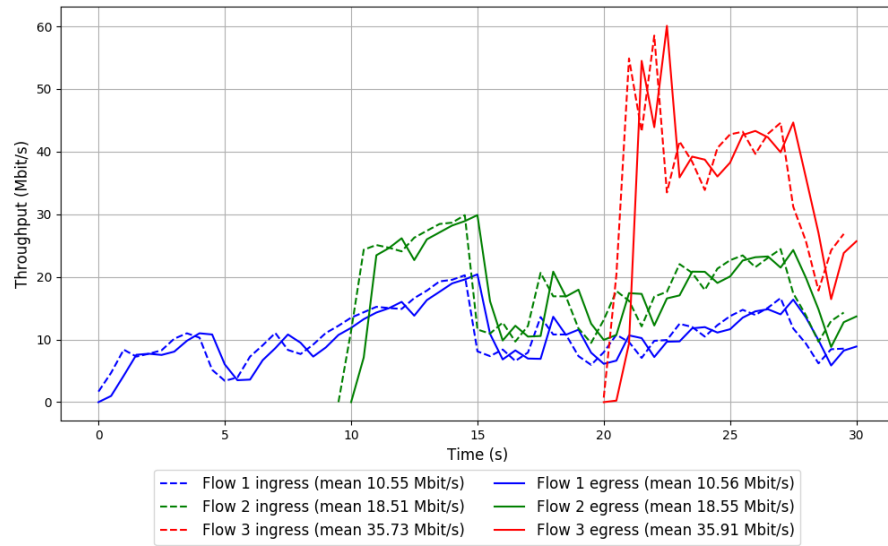


Run 5: Statistics of TCP Vegas

Start at: 2018-12-20 09:43:56  
End at: 2018-12-20 09:44:26  
Local clock offset: -1.433 ms  
Remote clock offset: -34.561 ms

# Below is generated by plot.py at 2018-12-20 10:07:03  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 34.61 Mbit/s  
95th percentile per-packet one-way delay: 108.360 ms  
Loss rate: 0.57%  
-- Flow 1:  
Average throughput: 10.56 Mbit/s  
95th percentile per-packet one-way delay: 105.364 ms  
Loss rate: 0.25%  
-- Flow 2:  
Average throughput: 18.55 Mbit/s  
95th percentile per-packet one-way delay: 108.227 ms  
Loss rate: 0.48%  
-- Flow 3:  
Average throughput: 35.91 Mbit/s  
95th percentile per-packet one-way delay: 113.620 ms  
Loss rate: 0.95%

## Run 5: Report of TCP Vegas — Data Link



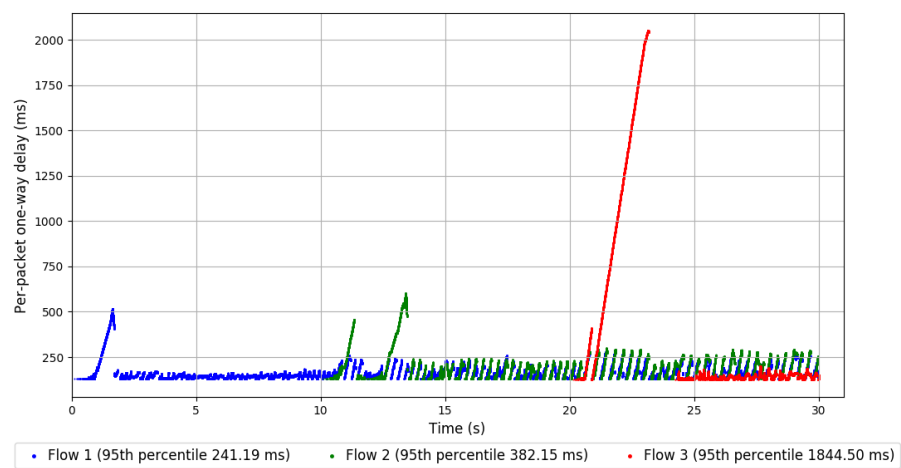
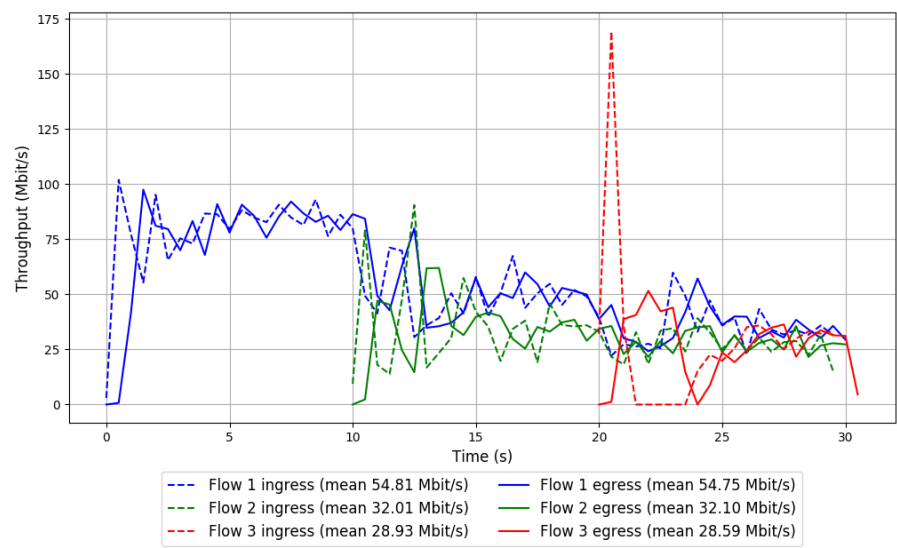


Run 1: Statistics of Verus

Start at: 2018-12-20 08:07:15  
End at: 2018-12-20 08:07:45  
Local clock offset: -2.508 ms  
Remote clock offset: -59.954 ms

# Below is generated by plot.py at 2018-12-20 10:07:09  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 85.42 Mbit/s  
95th percentile per-packet one-way delay: 416.181 ms  
Loss rate: 0.64%  
-- Flow 1:  
Average throughput: 54.75 Mbit/s  
95th percentile per-packet one-way delay: 241.190 ms  
Loss rate: 0.54%  
-- Flow 2:  
Average throughput: 32.10 Mbit/s  
95th percentile per-packet one-way delay: 382.152 ms  
Loss rate: 0.31%  
-- Flow 3:  
Average throughput: 28.59 Mbit/s  
95th percentile per-packet one-way delay: 1844.502 ms  
Loss rate: 1.91%

Run 1: Report of Verus — Data Link



Run 2: Statistics of Verus

Start at: 2018-12-20 08:31:37

End at: 2018-12-20 08:32:07

Local clock offset: -1.854 ms

Remote clock offset: 1.275 ms

# Below is generated by plot.py at 2018-12-20 10:07:33

# Datalink statistics

-- Total of 3 flows:

Average throughput: 84.99 Mbit/s

95th percentile per-packet one-way delay: 191.542 ms

Loss rate: 0.59%

-- Flow 1:

Average throughput: 53.68 Mbit/s

95th percentile per-packet one-way delay: 176.803 ms

Loss rate: 0.40%

-- Flow 2:

Average throughput: 31.44 Mbit/s

95th percentile per-packet one-way delay: 290.442 ms

Loss rate: 0.97%

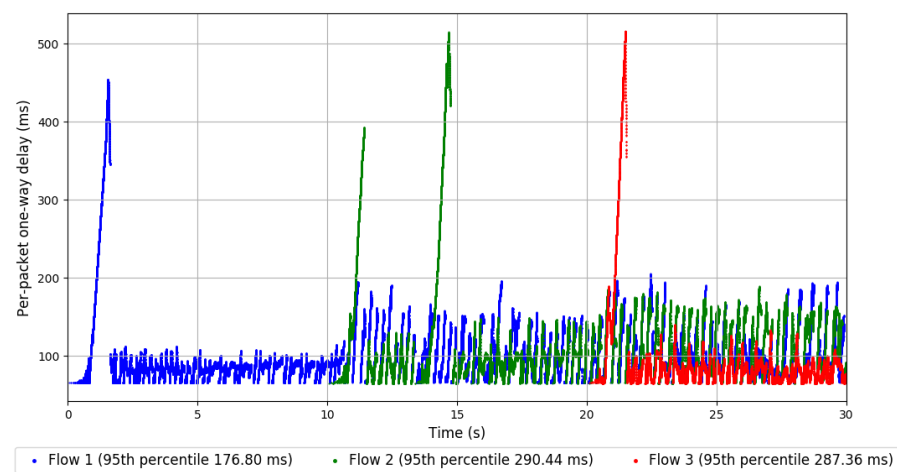
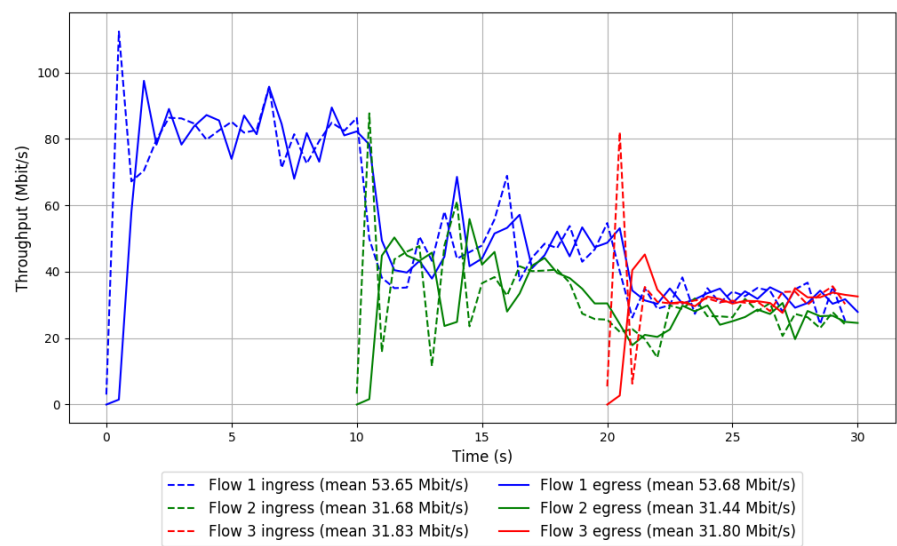
-- Flow 3:

Average throughput: 31.80 Mbit/s

95th percentile per-packet one-way delay: 287.362 ms

Loss rate: 0.81%

Run 2: Report of Verus — Data Link

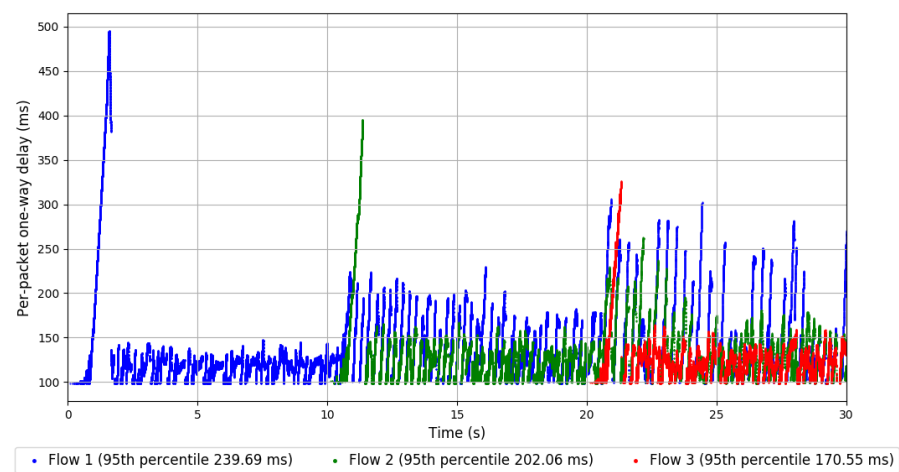
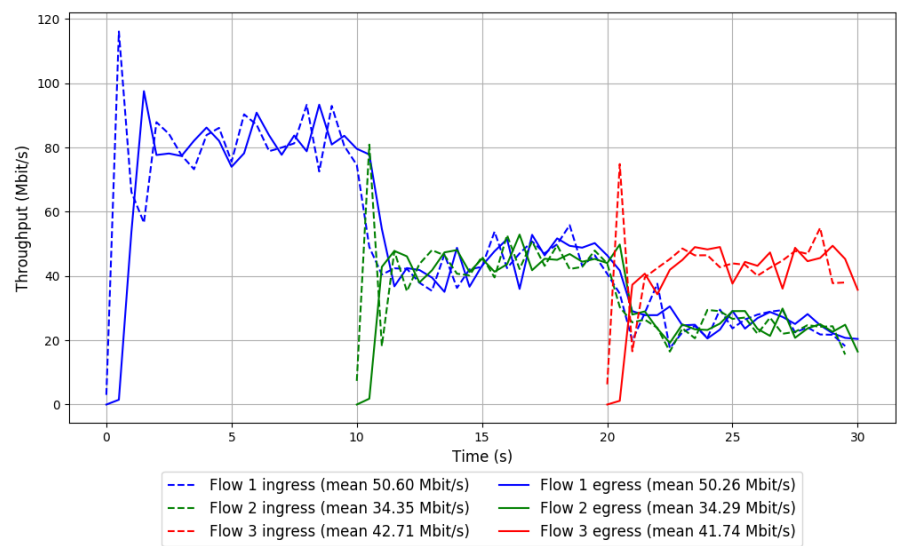


Run 3: Statistics of Verus

Start at: 2018-12-20 08:55:48  
End at: 2018-12-20 08:56:18  
Local clock offset: 1.087 ms  
Remote clock offset: -30.06 ms

# Below is generated by plot.py at 2018-12-20 10:07:48  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 86.84 Mbit/s  
95th percentile per-packet one-way delay: 222.786 ms  
Loss rate: 0.77%  
-- Flow 1:  
Average throughput: 50.26 Mbit/s  
95th percentile per-packet one-way delay: 239.685 ms  
Loss rate: 0.26%  
-- Flow 2:  
Average throughput: 34.29 Mbit/s  
95th percentile per-packet one-way delay: 202.057 ms  
Loss rate: 0.54%  
-- Flow 3:  
Average throughput: 41.74 Mbit/s  
95th percentile per-packet one-way delay: 170.552 ms  
Loss rate: 2.92%

Run 3: Report of Verus — Data Link

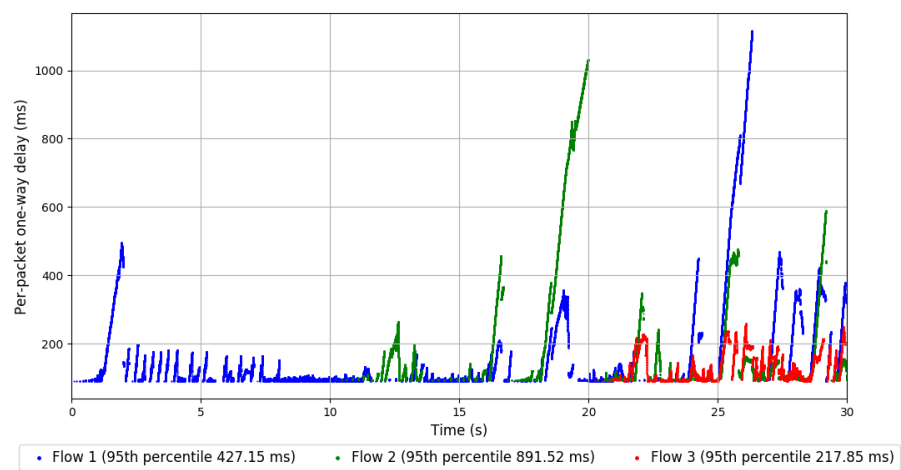
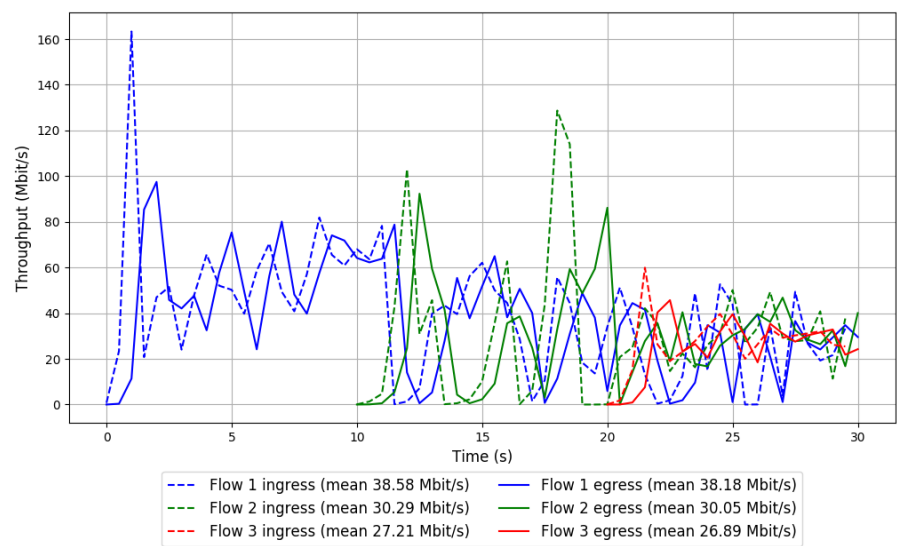


Run 4: Statistics of Verus

Start at: 2018-12-20 09:21:21  
End at: 2018-12-20 09:21:51  
Local clock offset: -0.664 ms  
Remote clock offset: -22.635 ms

# Below is generated by plot.py at 2018-12-20 10:07:48  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 66.75 Mbit/s  
95th percentile per-packet one-way delay: 624.363 ms  
Loss rate: 0.87%  
-- Flow 1:  
Average throughput: 38.18 Mbit/s  
95th percentile per-packet one-way delay: 427.148 ms  
Loss rate: 0.44%  
-- Flow 2:  
Average throughput: 30.05 Mbit/s  
95th percentile per-packet one-way delay: 891.523 ms  
Loss rate: 1.03%  
-- Flow 3:  
Average throughput: 26.89 Mbit/s  
95th percentile per-packet one-way delay: 217.855 ms  
Loss rate: 2.34%

Run 4: Report of Verus — Data Link



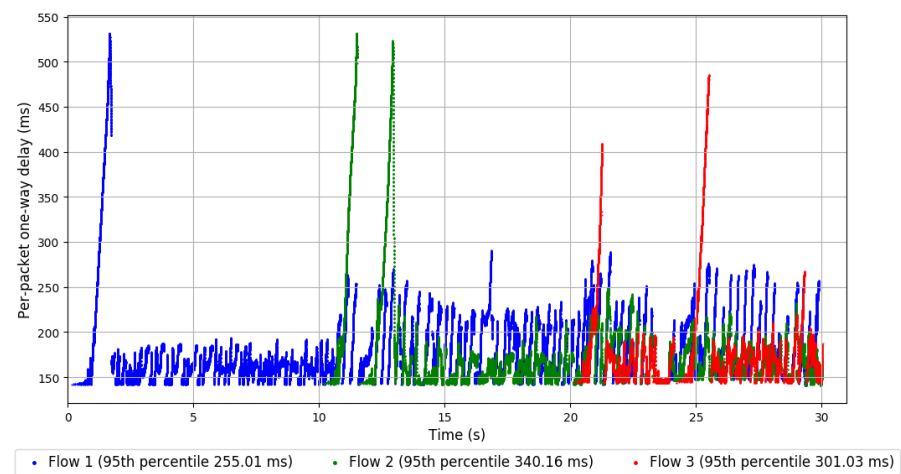
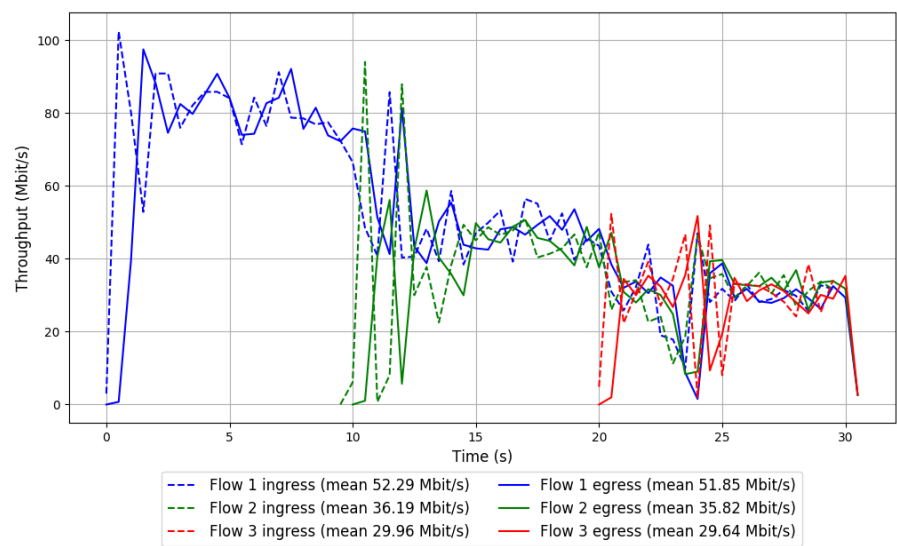


Run 5: Statistics of Verus

Start at: 2018-12-20 09:46:27  
End at: 2018-12-20 09:46:57  
Local clock offset: 0.804 ms  
Remote clock offset: -68.062 ms

# Below is generated by plot.py at 2018-12-20 10:07:49  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 85.48 Mbit/s  
95th percentile per-packet one-way delay: 270.165 ms  
Loss rate: 1.22%  
-- Flow 1:  
Average throughput: 51.85 Mbit/s  
95th percentile per-packet one-way delay: 255.015 ms  
Loss rate: 1.03%  
-- Flow 2:  
Average throughput: 35.82 Mbit/s  
95th percentile per-packet one-way delay: 340.160 ms  
Loss rate: 1.38%  
-- Flow 3:  
Average throughput: 29.64 Mbit/s  
95th percentile per-packet one-way delay: 301.030 ms  
Loss rate: 1.82%

Run 5: Report of Verus — Data Link

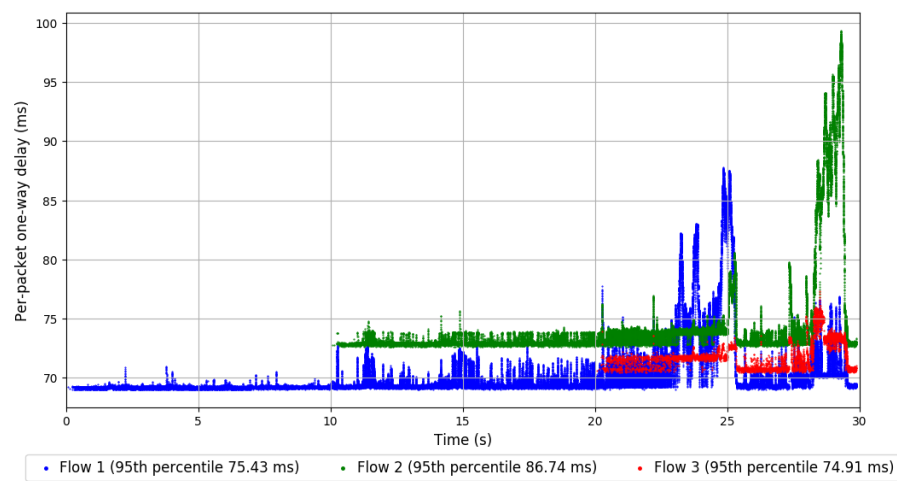
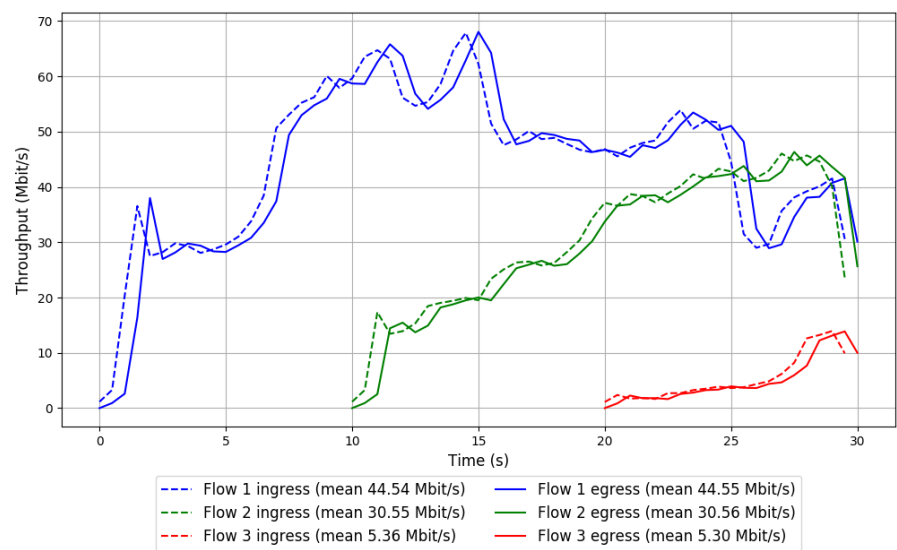


Run 1: Statistics of PCC-Vivace

Start at: 2018-12-20 08:09:51  
End at: 2018-12-20 08:10:21  
Local clock offset: -2.932 ms  
Remote clock offset: -5.785 ms

# Below is generated by plot.py at 2018-12-20 10:07:49  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 66.59 Mbit/s  
95th percentile per-packet one-way delay: 77.809 ms  
Loss rate: 0.32%  
-- Flow 1:  
Average throughput: 44.55 Mbit/s  
95th percentile per-packet one-way delay: 75.432 ms  
Loss rate: 0.24%  
-- Flow 2:  
Average throughput: 30.56 Mbit/s  
95th percentile per-packet one-way delay: 86.738 ms  
Loss rate: 0.37%  
-- Flow 3:  
Average throughput: 5.30 Mbit/s  
95th percentile per-packet one-way delay: 74.908 ms  
Loss rate: 1.83%

Run 1: Report of PCC-Vivace — Data Link

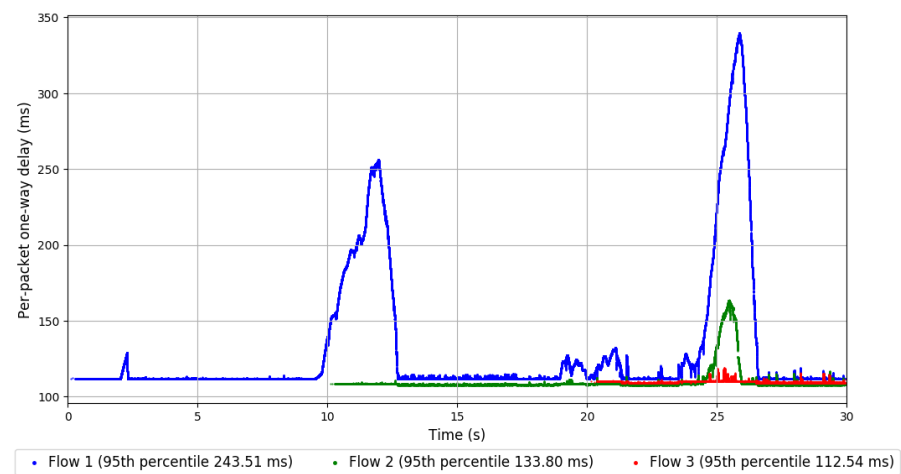
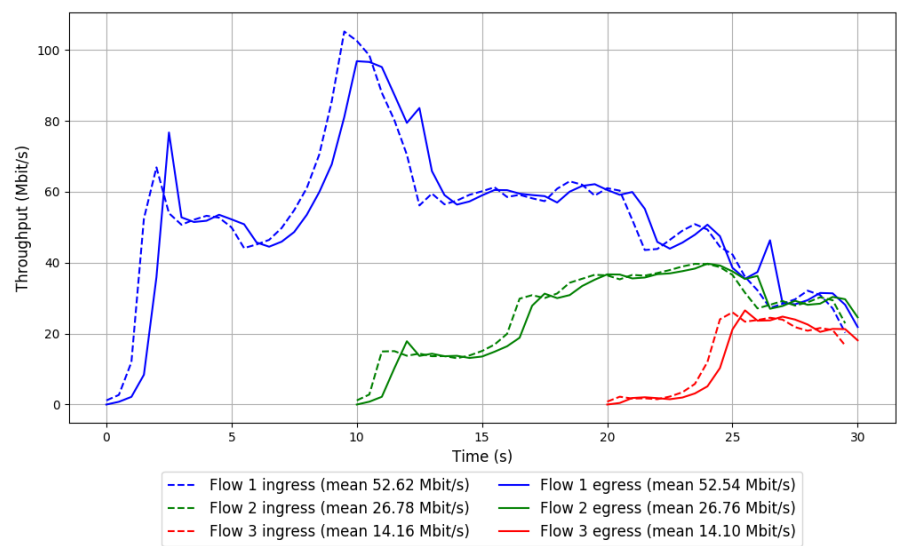


Run 2: Statistics of PCC-Vivace

Start at: 2018-12-20 08:34:10  
End at: 2018-12-20 08:34:40  
Local clock offset: -2.512 ms  
Remote clock offset: -41.938 ms

# Below is generated by plot.py at 2018-12-20 10:07:53  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 74.94 Mbit/s  
95th percentile per-packet one-way delay: 217.128 ms  
Loss rate: 0.48%  
-- Flow 1:  
Average throughput: 52.54 Mbit/s  
95th percentile per-packet one-way delay: 243.510 ms  
Loss rate: 0.41%  
-- Flow 2:  
Average throughput: 26.76 Mbit/s  
95th percentile per-packet one-way delay: 133.801 ms  
Loss rate: 0.50%  
-- Flow 3:  
Average throughput: 14.10 Mbit/s  
95th percentile per-packet one-way delay: 112.537 ms  
Loss rate: 1.16%

Run 2: Report of PCC-Vivace — Data Link

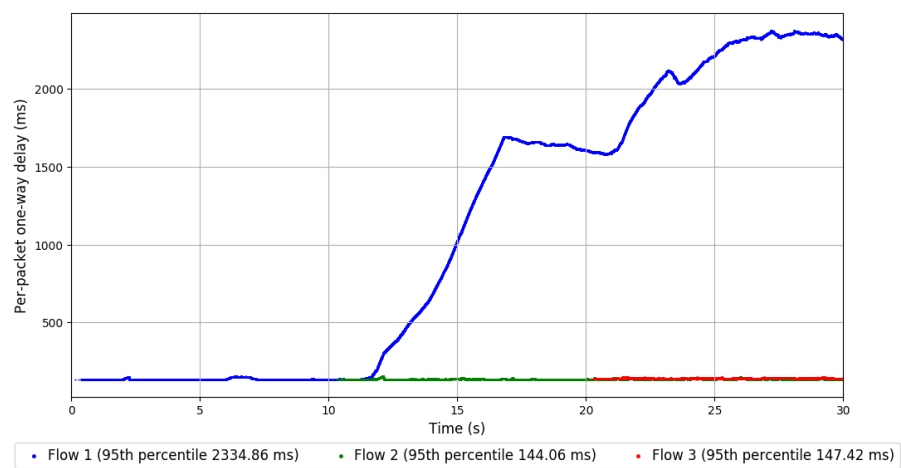
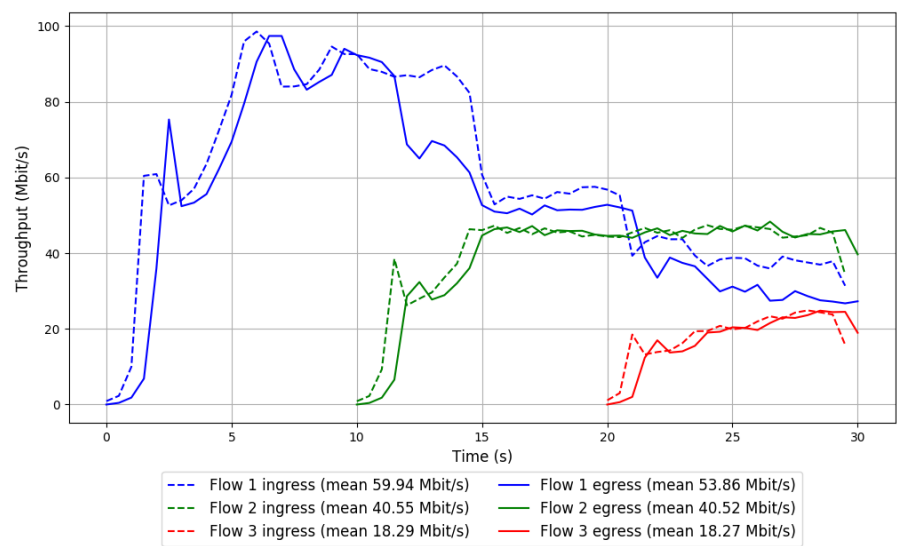


Run 3: Statistics of PCC-Vivace

Start at: 2018-12-20 08:58:29  
End at: 2018-12-20 08:58:59  
Local clock offset: -0.084 ms  
Remote clock offset: -68.71 ms

# Below is generated by plot.py at 2018-12-20 10:07:57  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 86.78 Mbit/s  
95th percentile per-packet one-way delay: 2266.754 ms  
Loss rate: 6.86%  
-- Flow 1:  
Average throughput: 53.86 Mbit/s  
95th percentile per-packet one-way delay: 2334.864 ms  
Loss rate: 10.34%  
-- Flow 2:  
Average throughput: 40.52 Mbit/s  
95th percentile per-packet one-way delay: 144.059 ms  
Loss rate: 0.45%  
-- Flow 3:  
Average throughput: 18.27 Mbit/s  
95th percentile per-packet one-way delay: 147.422 ms  
Loss rate: 0.92%

Run 3: Report of PCC-Vivace — Data Link



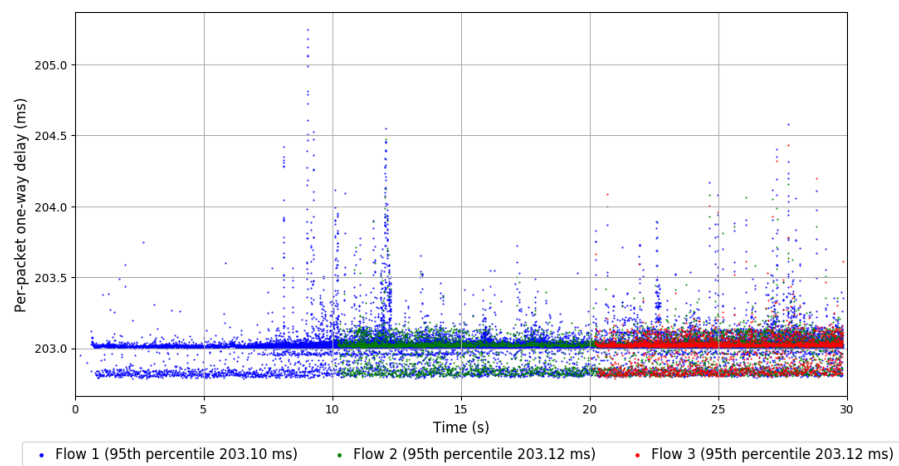
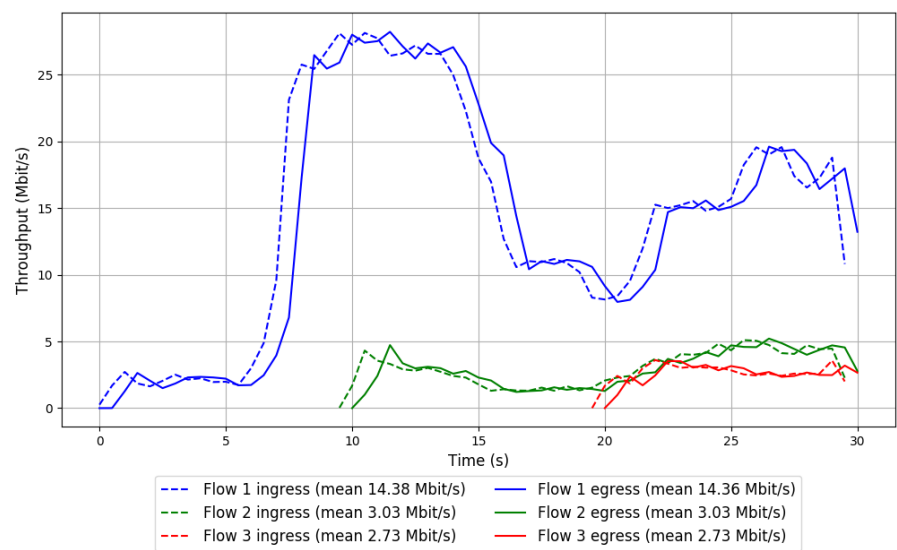


Run 4: Statistics of PCC-Vivace

Start at: 2018-12-20 09:23:54  
End at: 2018-12-20 09:24:24  
Local clock offset: 0.219 ms  
Remote clock offset: -132.21 ms

# Below is generated by plot.py at 2018-12-20 10:07:57  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 17.28 Mbit/s  
95th percentile per-packet one-way delay: 203.110 ms  
Loss rate: 0.72%  
-- Flow 1:  
Average throughput: 14.36 Mbit/s  
95th percentile per-packet one-way delay: 203.099 ms  
Loss rate: 0.63%  
-- Flow 2:  
Average throughput: 3.03 Mbit/s  
95th percentile per-packet one-way delay: 203.125 ms  
Loss rate: 0.92%  
-- Flow 3:  
Average throughput: 2.73 Mbit/s  
95th percentile per-packet one-way delay: 203.122 ms  
Loss rate: 1.67%

Run 4: Report of PCC-Vivace — Data Link

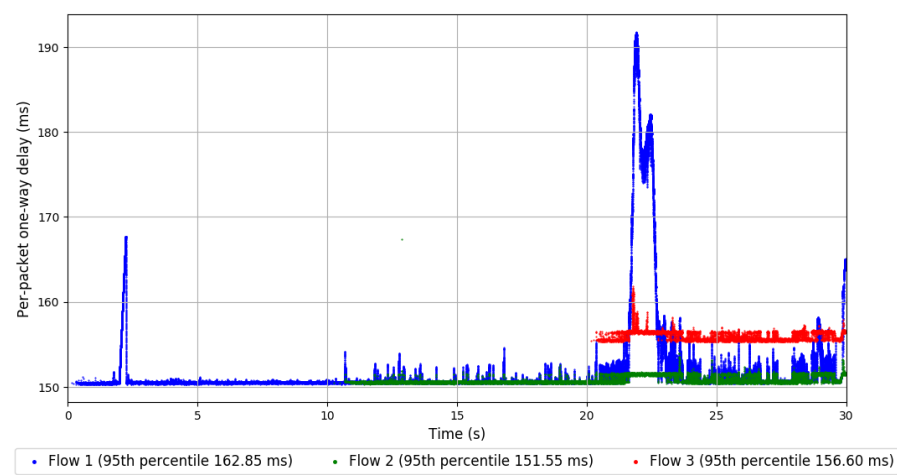
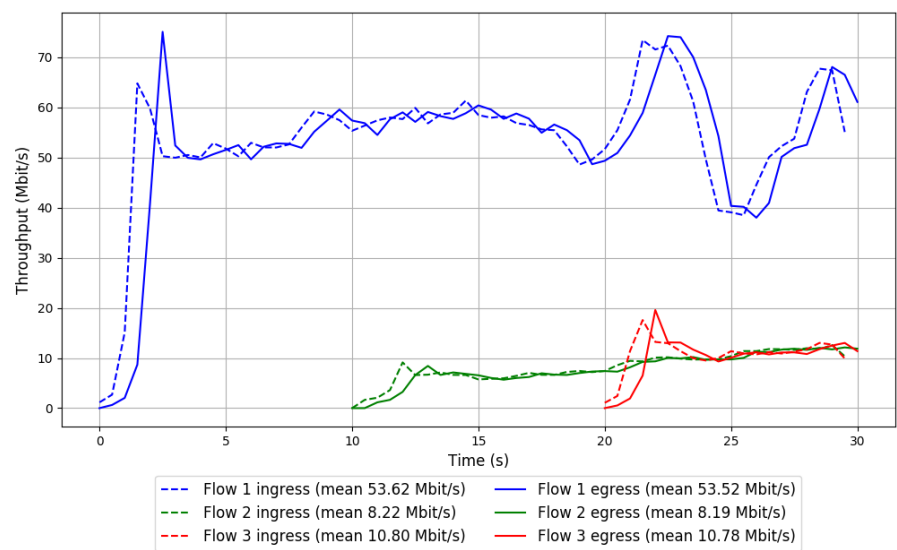


Run 5: Statistics of PCC-Vivace

Start at: 2018-12-20 09:49:23  
End at: 2018-12-20 09:49:53  
Local clock offset: 2.869 ms  
Remote clock offset: -72.329 ms

# Below is generated by plot.py at 2018-12-20 10:07:58  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 62.47 Mbit/s  
95th percentile per-packet one-way delay: 159.126 ms  
Loss rate: 0.55%  
-- Flow 1:  
Average throughput: 53.52 Mbit/s  
95th percentile per-packet one-way delay: 162.852 ms  
Loss rate: 0.49%  
-- Flow 2:  
Average throughput: 8.19 Mbit/s  
95th percentile per-packet one-way delay: 151.549 ms  
Loss rate: 0.76%  
-- Flow 3:  
Average throughput: 10.78 Mbit/s  
95th percentile per-packet one-way delay: 156.598 ms  
Loss rate: 1.14%

Run 5: Report of PCC-Vivace — Data Link

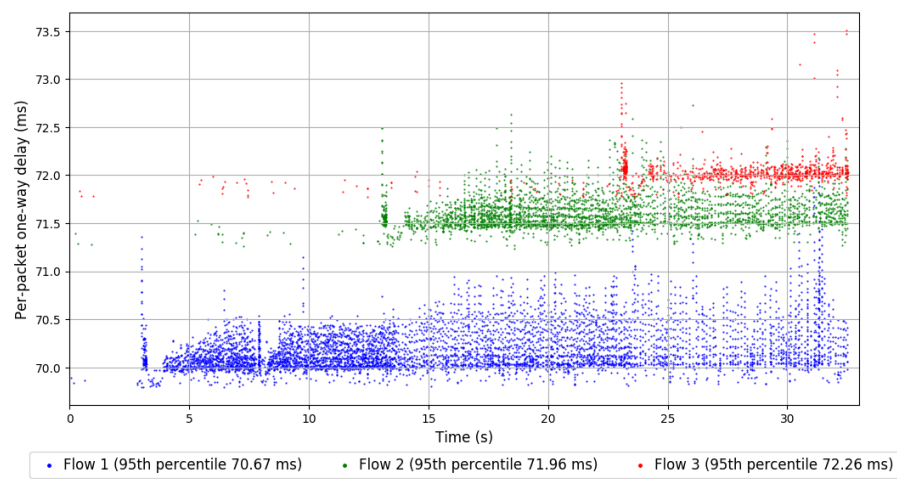
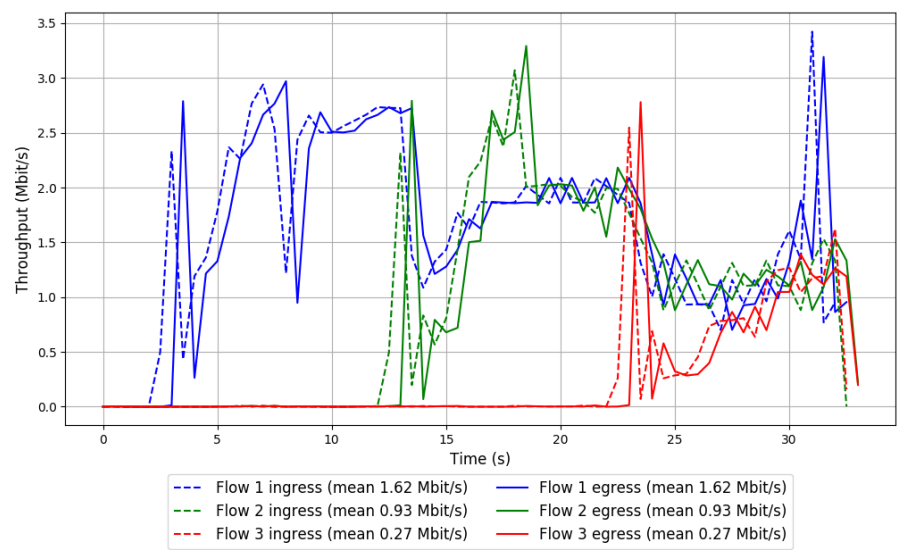


Run 1: Statistics of WebRTC media

Start at: 2018-12-20 07:54:15  
End at: 2018-12-20 07:54:45  
Local clock offset: 1.465 ms  
Remote clock offset: -2.904 ms

# Below is generated by plot.py at 2018-12-20 10:07:58  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 2.81 Mbit/s  
95th percentile per-packet one-way delay: 72.034 ms  
Loss rate: 0.31%  
-- Flow 1:  
Average throughput: 1.62 Mbit/s  
95th percentile per-packet one-way delay: 70.670 ms  
Loss rate: 0.13%  
-- Flow 2:  
Average throughput: 0.93 Mbit/s  
95th percentile per-packet one-way delay: 71.963 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 0.27 Mbit/s  
95th percentile per-packet one-way delay: 72.260 ms  
Loss rate: 2.47%

Run 1: Report of WebRTC media — Data Link



Run 2: Statistics of WebRTC media

Start at: 2018-12-20 08:18:33

End at: 2018-12-20 08:19:03

Local clock offset: -1.153 ms

Remote clock offset: -0.07 ms

# Below is generated by plot.py at 2018-12-20 10:07:58

# Datalink statistics

-- Total of 3 flows:

Average throughput: 2.75 Mbit/s

95th percentile per-packet one-way delay: 67.487 ms

Loss rate: 0.05%

-- Flow 1:

Average throughput: 1.58 Mbit/s

95th percentile per-packet one-way delay: 67.602 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.91 Mbit/s

95th percentile per-packet one-way delay: 66.242 ms

Loss rate: 0.00%

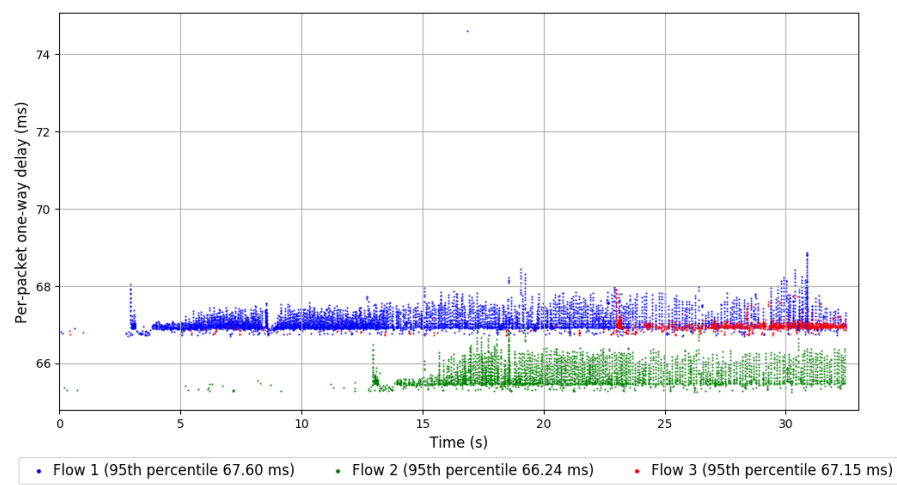
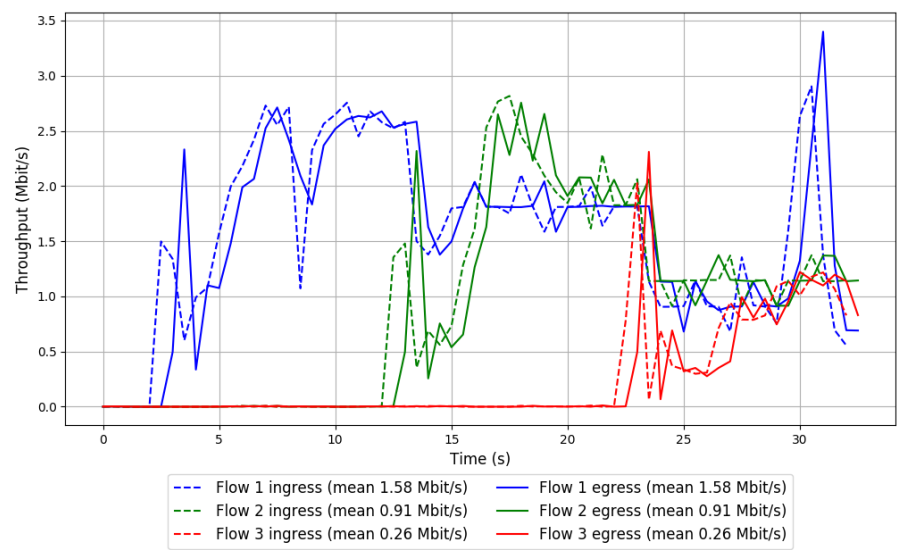
-- Flow 3:

Average throughput: 0.26 Mbit/s

95th percentile per-packet one-way delay: 67.150 ms

Loss rate: 0.49%

Run 2: Report of WebRTC media — Data Link



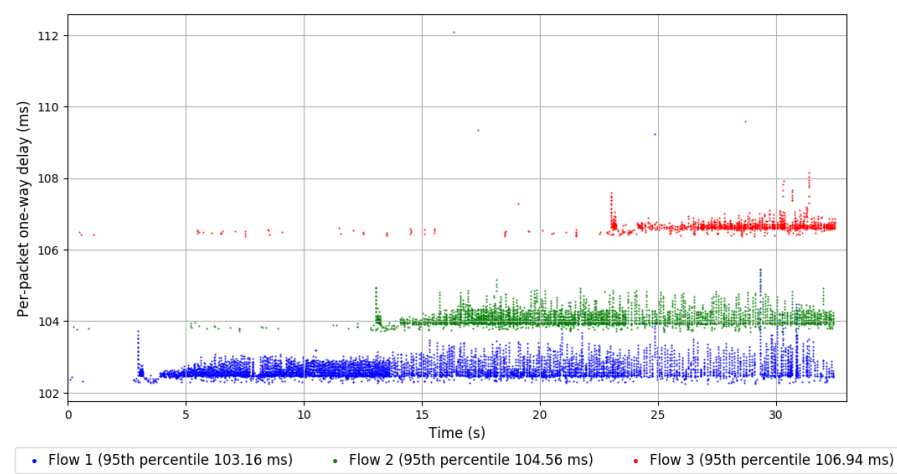
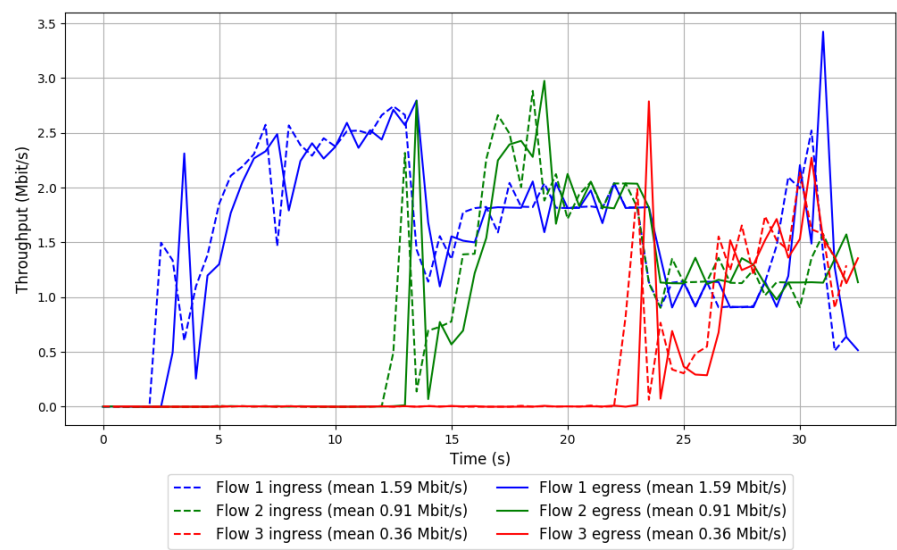


Run 3: Statistics of WebRTC media

Start at: 2018-12-20 08:42:52  
End at: 2018-12-20 08:43:22  
Local clock offset: -0.711 ms  
Remote clock offset: -35.598 ms

# Below is generated by plot.py at 2018-12-20 10:07:58  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 2.85 Mbit/s  
95th percentile per-packet one-way delay: 106.675 ms  
Loss rate: 0.28%  
-- Flow 1:  
Average throughput: 1.59 Mbit/s  
95th percentile per-packet one-way delay: 103.155 ms  
Loss rate: 0.12%  
-- Flow 2:  
Average throughput: 0.91 Mbit/s  
95th percentile per-packet one-way delay: 104.557 ms  
Loss rate: 0.39%  
-- Flow 3:  
Average throughput: 0.36 Mbit/s  
95th percentile per-packet one-way delay: 106.944 ms  
Loss rate: 0.69%

Run 3: Report of WebRTC media — Data Link



Run 4: Statistics of WebRTC media

Start at: 2018-12-20 09:08:27

End at: 2018-12-20 09:08:57

Local clock offset: 0.076 ms

Remote clock offset: 0.327 ms

# Below is generated by plot.py at 2018-12-20 10:07:58

# Datalink statistics

-- Total of 3 flows:

Average throughput: 2.91 Mbit/s

95th percentile per-packet one-way delay: 70.681 ms

Loss rate: 0.38%

-- Flow 1:

Average throughput: 1.62 Mbit/s

95th percentile per-packet one-way delay: 67.950 ms

Loss rate: 0.25%

-- Flow 2:

Average throughput: 0.91 Mbit/s

95th percentile per-packet one-way delay: 70.836 ms

Loss rate: 0.38%

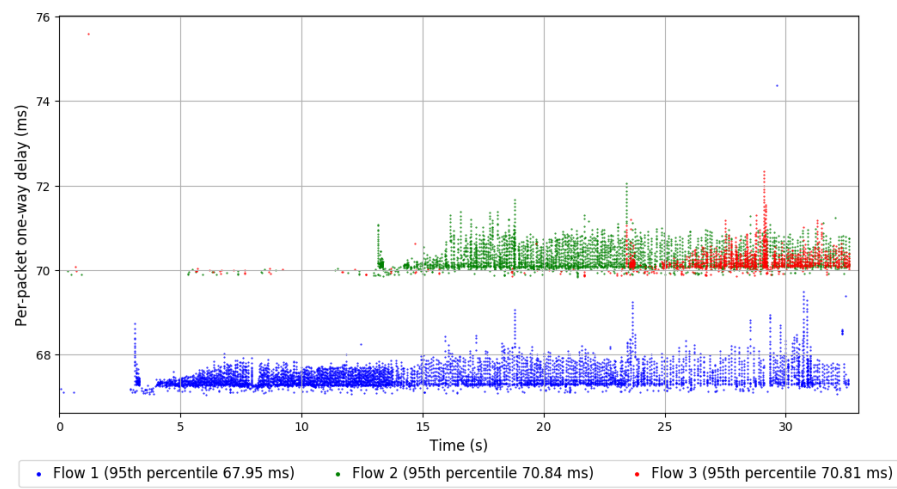
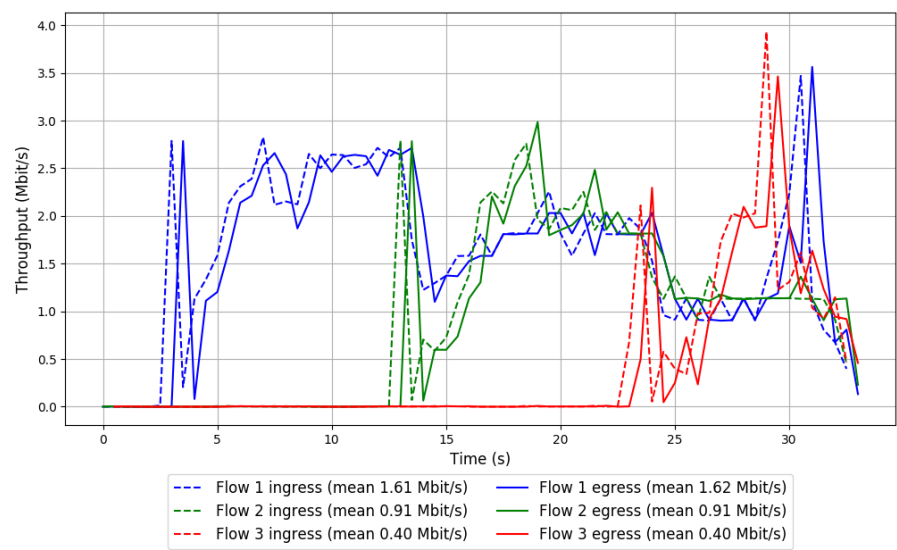
-- Flow 3:

Average throughput: 0.40 Mbit/s

95th percentile per-packet one-way delay: 70.810 ms

Loss rate: 0.92%

Run 4: Report of WebRTC media — Data Link



Run 5: Statistics of WebRTC media

Start at: 2018-12-20 09:33:16  
End at: 2018-12-20 09:33:46  
Local clock offset: -2.674 ms  
Remote clock offset: -81.91 ms

# Below is generated by plot.py at 2018-12-20 10:07:58  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 2.83 Mbit/s  
95th percentile per-packet one-way delay: 152.640 ms  
Loss rate: 0.08%  
-- Flow 1:  
Average throughput: 1.60 Mbit/s  
95th percentile per-packet one-way delay: 149.872 ms  
Loss rate: 0.12%  
-- Flow 2:  
Average throughput: 0.90 Mbit/s  
95th percentile per-packet one-way delay: 152.638 ms  
Loss rate: 0.04%  
-- Flow 3:  
Average throughput: 0.33 Mbit/s  
95th percentile per-packet one-way delay: 152.896 ms  
Loss rate: 0.01%

Run 5: Report of WebRTC media — Data Link

